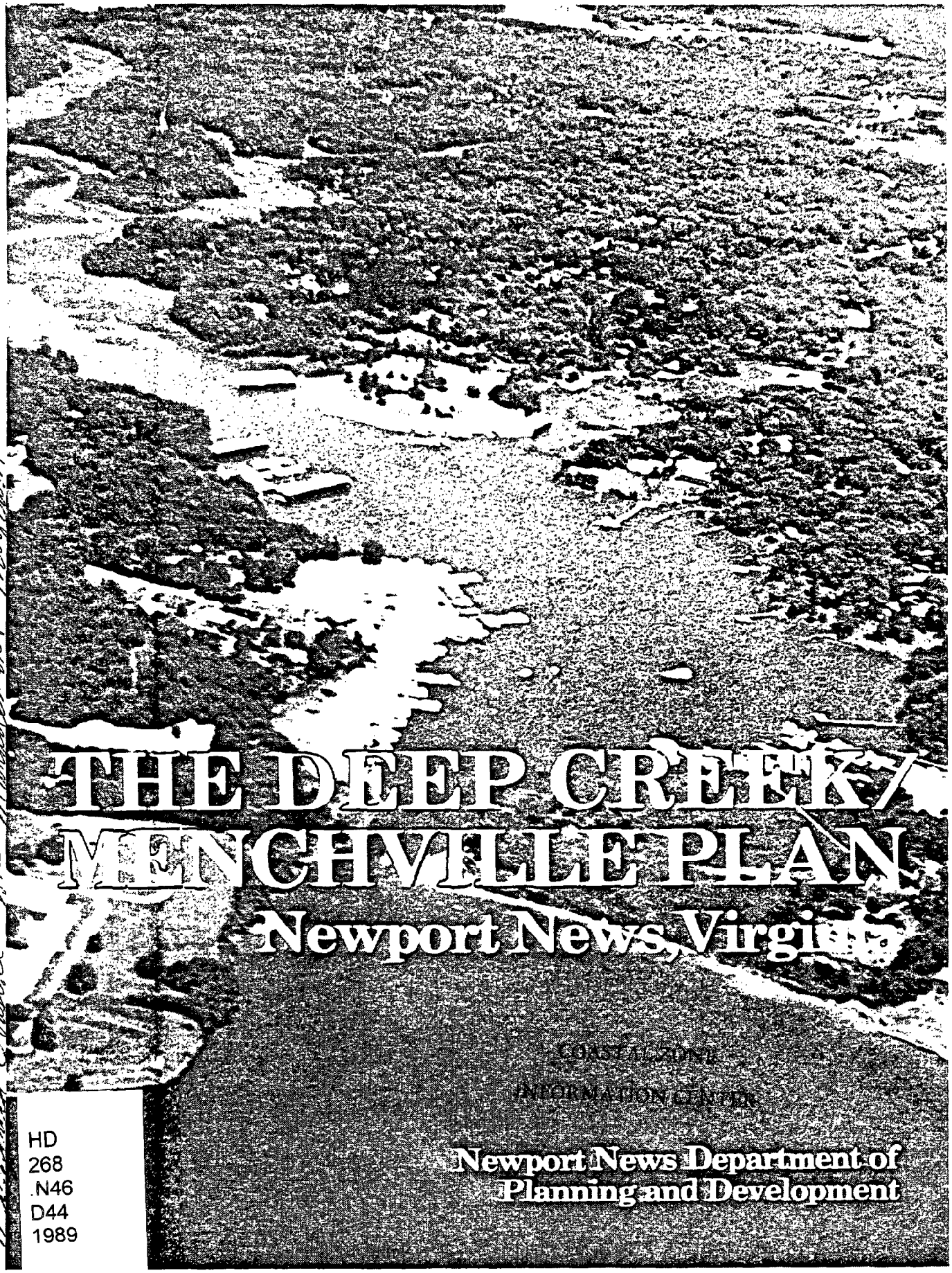

THE DEEP CREEK/ MENCHVILLE PLAN

Newport News, Virginia

Newport News Department of
Planning and Development

DRAFT

THE DEEP CREEK/ MENCHVILLE PLAN

Newport News, Virginia

June 7, 1989

Newport News Department of Planning and Development

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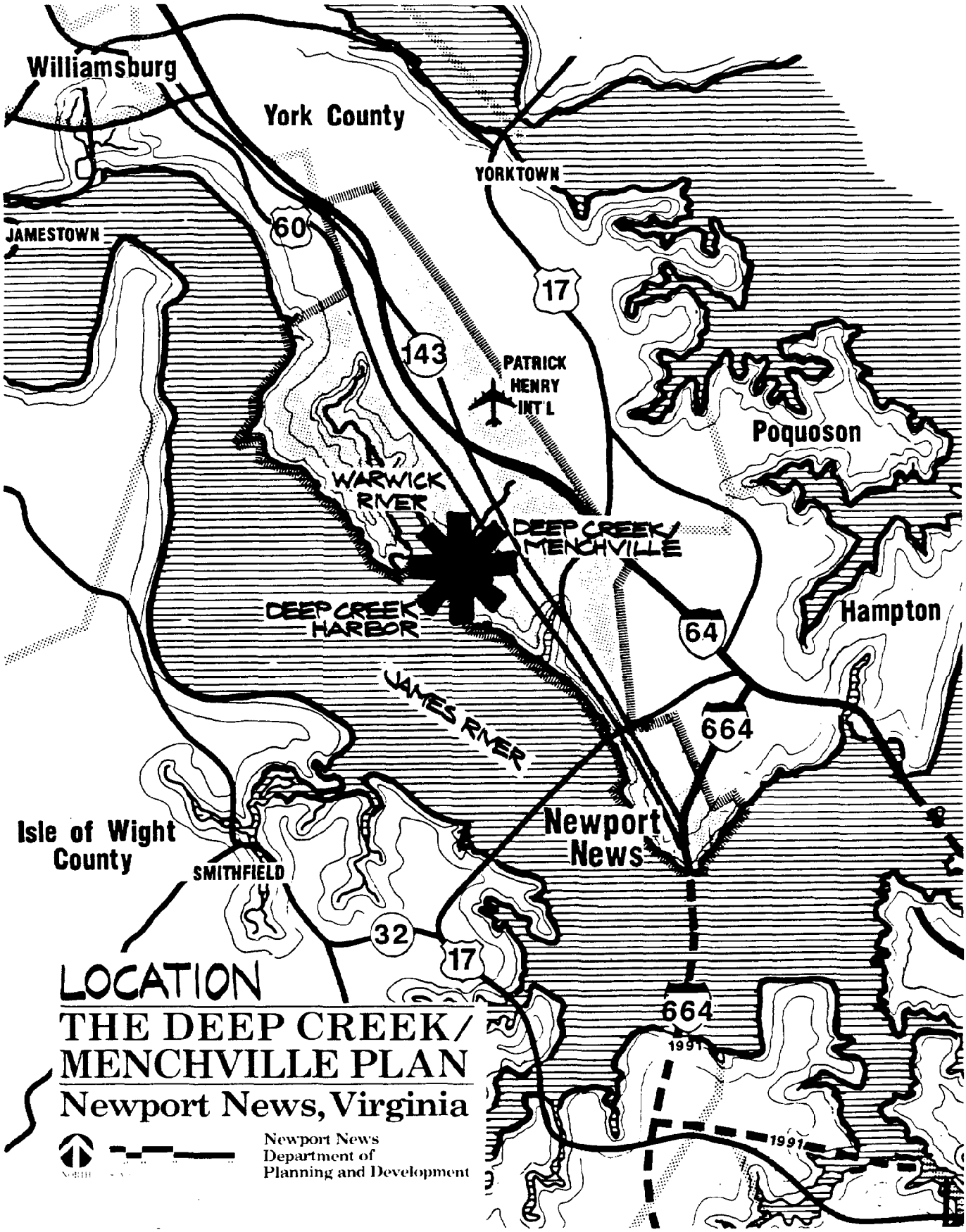
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INTRODUCTION

The Deep Creek/Menchville area contains some of the most valuable land, water, and environmental resources in the City of Newport News and the Virginia Tidewater region. The area contains virtually the last undeveloped land overlooking the James River in Newport News and is harbor to the James River seafood harvesting industry. The area is also rich in environmental, historical and cultural resources.

More than 400 acres, with over one-half mile of Warwick River frontage at its confluence with the James River, have been preserved from urban development since 1918 by the City Farm with its agricultural land and minimum security detention facility.

The centerpiece of the planning area is Deep Creek Harbor. As the primary harbor serving the watermen of the James River, Deep Creek is vital to the world famous Virginia oyster industry. More than 40% of the entire Virginia market oyster harvest was landed at Deep Creek Harbor in 1988, making it the number one oyster landing site in the Commonwealth. The James River and Deep Creek Harbor are critical to the seafood economy of Virginia, as well as the City of Newport News. Over five million dollars worth of oysters have been harvested annually from the James River in recent years, with the bulk of these coming through Deep Creek Harbor. The James produces 75% of the Commonwealth's seed oysters and thus is known as the "mother river" of the Chesapeake Bay.

Deep Creek Harbor also provides shelter for over 100 recreational boats at two marinas and several individual slips.

The quality wetlands, waterways, and wooded areas of Deep Creek/Menchville create a quality natural environment. The historic working harbor, panoramic views of the James and the quiet rural feeling of the City Farm create a place of special character.

PURPOSE

Making the most of the area's valuable resources is the purpose of the Deep Creek/Menchville Plan. The Plan serves as the framework for the development of the area and policy for decisions which affect it. It provides analyses of existing conditions in the area, a statement of the community's desired future, and strategies for achieving that future.

ISSUES

There are many issues affecting the development of the Deep Creek/Menchville area. Included are relocation of the City Farm's minimum security detention and police facilities, accommodation of dredge spoil from the Deep Creek Harbor and river channel, reuse of the closed Menchville Landfill and existing dredge deposits, expansion of the Hampton Roads Sanitation District wastewater treatment plant, residential development pressure, lack of public access to the waterfront, impacts on the seafood harvesting industry, environmental impacts, and inadequate streets and utilities serving the area. The Plan addresses these issues in a comprehensive manner.

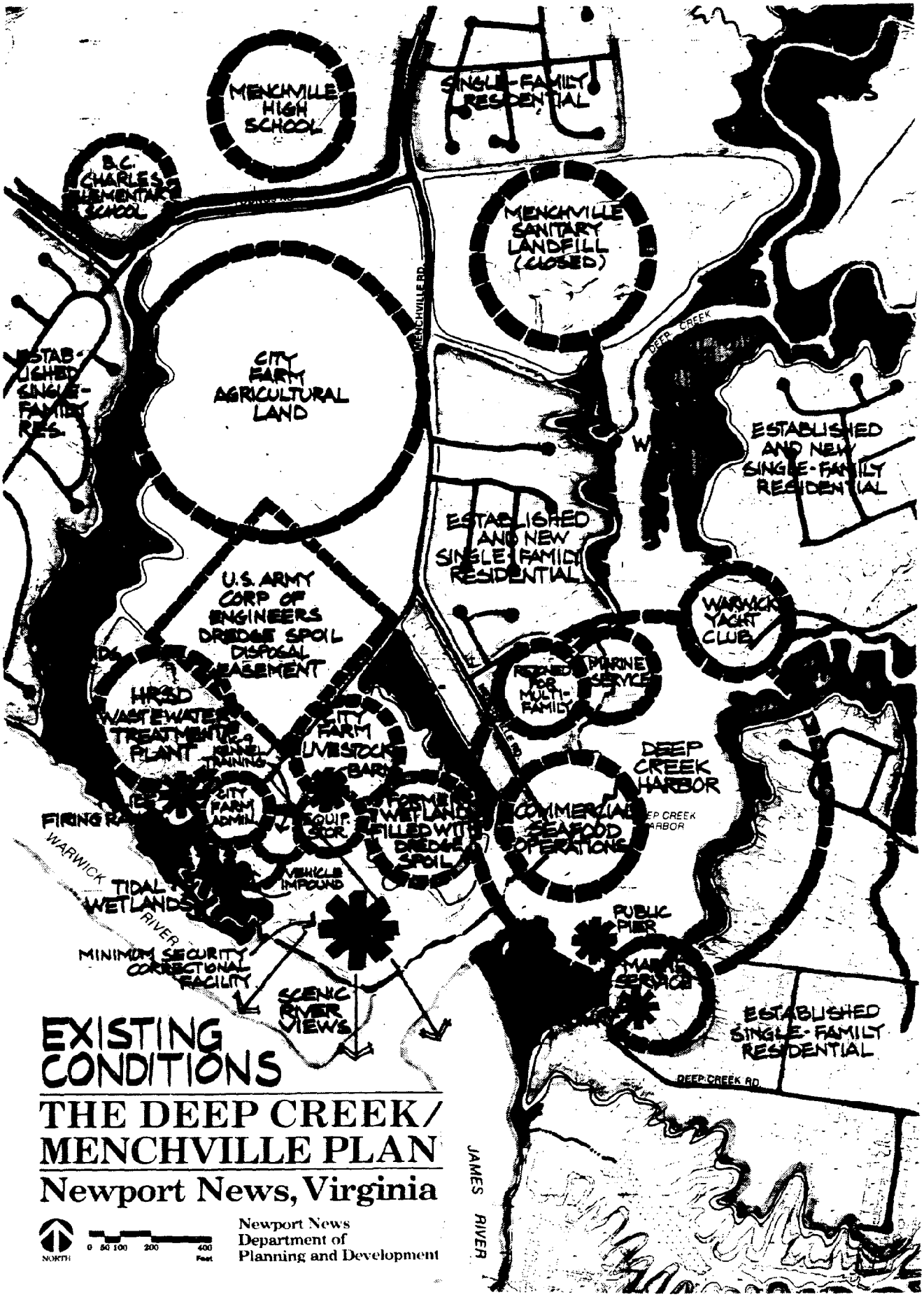
Relocation of the City Farm has been discussed for the past decade. Although an important facility to the City and region, it has been recognized that a detention facility is not the most advantageous use of this waterfront land. In addition, the existing facility is outdated and cannot adequately accommodate the number of inmates assigned here by the State and local penal system.

The City Farm is also the site of the Newport News Police Department canine training area and kennel, weapons firing range, and vehicle impoundment area. These uses are also located near the riverfront. Noise and safety concerns associated with the firing range have been voiced by the community.

Use of the City Farm land upon relocation of the detention facility has been the subject of much discussion. It has potential for a wide variety of uses, including residential, recreational, or a mix of these and commercial uses.

The current lack of major park and recreation facilities in the highly-populated northwest portion of Newport News is a major concern. Related to this is the lack of public access to the riverfront in the City. Less than one and three-fourths miles of Newport News' 42-mile shoreline is available for recreational use and enjoyment by the public.

Although the James River is currently the most productive oyster resource in the Commonwealth, the seafood harvesting industry here has been struggling due to disease, pollution, and the loss of land and facilities in Deep Creek Harbor to other uses. Facilities for mooring, service, parking and other seafood industry needs are inadequate and deteriorating. In 1986 an unsuccessful application was submitted to convert the Menchville Marina area



EXISTING CONDITIONS

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to condominium use. In 1988, seven acres of the Harborview Marina land were rezoned for multi-family residential use. Although two acres remain for the Marina, there is concern regarding the viability of service and other marine activities adjacent to the 75 condominium units approved. Appropriate use and administration of the City-owned pier at Deep Creek has been an issue. The pier serves as a major off-loading and mooring site for the seafood industry. The pier has poor land access and very little parking. The pier and its surrounding area are in serious need of improvements, clean-up, and support facilities. Across Deep Creek Harbor, the City also owns a 0.4-acre parcel of land at the Menchville Marina that is used by the seafood industry. Both sites were donated to the City for the expressed purpose of providing facilities for the watermen.

Rapid residential development has altered the rural character of the area. Over 150 dwelling units have been constructed or approved over the past three years, a 175 percent increase over the 85 units previously existing. Pressure is great for conversion of remaining land in the area to residential use to satisfy the high demand for dwindling waterfront real estate. Development pressure is being placed on the City Farm property as well as surrounding privately-owned parcels.

Expansion plans for the James River Wastewater Treatment Plant require additional land. This expansion is necessary to increase capacity and to provide nutrient removal facilities for improved water quality. The plant has occupied its site on the Warwick River since 1967. Recent improvements have been made by the plant's owner, the Hampton Roads Sanitation District (HRSD), to address odor, noise and chlorine problems associated with the facility, which is adjacent to the Denbigh Plantation residential neighborhood.

There currently exists a U.S. Army Corps of Engineers dredge disposal easement for a 30-acre site located on the City Farm land. This seriously compromises the usability of land in this area. Use of this disposal site could commence within the next two years unless the parties can agree on an alternate site.

A wetland area filled with dredge material disposed of in the early 1960s exists on City Farm and the adjacent private land at the mouth of Deep Creek. This area still does not support vegetation after nearly 30 years. Reclamation of this site is needed.

Reclamation of the recently closed Menchville sanitary landfill is a land use problem which must be addressed. Methane gas production from the landfill has been effectively controlled by a collection/burner system. Although no off-site pollution from the landfill has been detected, monitoring for potential environmental impacts is ongoing. The site has a clay cap which must be protected to prevent leaching of rainwater through the landfill. The visual impact of the landfill on the adjacent Menchville Meadows neighborhood is also a concern.

Adequate streets are an issue in the area. Both Menchville Road and Deep Creek Road are narrow substandard streets, but serve as the primary motor vehicle access to the Harbor. Utilities in the area are a concern. Water pressure is seriously inadequate in lower Menchville and much of the area has no sanitary sewer. Many of the private septic systems are in poor condition and are draining into the Harbor. Storm water runoff, handled mainly by open ditches, is another contributor to Deep Creek water pollution.

The quality natural environment of Deep Creek/Menchville is being impacted. The waters and wetlands of Deep Creek are contaminated with oil, grease, organics, metals, sewage and bacteria, as well as solid trash. Recreational and commercial boating and Marina operations, along with restaurant and household septic system runoff, are the main contributors to this pollution, with the exception of the metals.

During 1988, the General assembly of Virginia approved House Bill 925 which created the Chesapeake Bay Preservation Act. This act will require localities to identify and designate Chesapeake Bay Preservation Areas and establish criteria for the use and development of these areas, between July 1, 1989 and June 30, 1990. The Deep Creek/Menchville area will be affected by the regulations which are being promulgated now.

PROCESS

Extensive community participation throughout the process provided information on the various plan components and the community's desired future for the area. The input from the highly diversified community provided direction in the development of the Plan.

The planning process involved analyses of the area's existing conditions, including land use, zoning, development history, development potential, and facilities/services available. Along with these, an environmental analysis examining the area's flora and fauna, sensitive areas, environmental hazards, and water quality was conducted. Consultant studies involving much of this work were conducted by Malcolm Pirnie Inc., a private environmental and engineering consultant under contract to the City. This contract was made possible by grant funds from the Virginia Coastal Resource Management Program.

The background and program needs of the diverse land use elements in the planning area received extensive study. A number of conceptual land use alternatives were developed and analyzed. These were refined into two concepts for public discussion. Community input on these alternative concepts, as well as the results of the existing conditions and environmental analyses, served as the basis of a "Master Plan" for the Deep Creek/Menchville Area.

The planning process included development of strategies to make the Master Plan become reality. It outlined specific development projects, phasing, and a program for effective implementation of the Plan.

PARTICIPATION AND GOALS

COMMUNITY PARTICIPATION

A key factor in the formation of the Deep Creek/Menchville Plan has been the high level of community participation. A large number of residents, civic group members, property owners, watermen, business people, public agencies, City departments, and elected and appointed officials have played a key and active role in the Plan's creation and therefore can claim ownership in the plan. The purpose of this extensive participation effort was to produce a community based plan that would define the desired future for the Deep Creek/Menchville area. Only through the involvement of the many groups and individuals with a stake in the development of this area, could a rational, workable plan result with the support necessary for implementation.

Participation in the planning process occurred primarily through a series of individual, group and community meetings, and a written questionnaire. Meetings were held with the Concerned Denbigh Citizens and the Working Watermen's Association, two groups which have interests in the area. Several City Departments were consulted during the process. The Parks and Recreation, City Farm Adult Corrections, Police, Health, and Public Works Departments were closely involved because of the major existing and proposed facilities in the area which they administer. Other public agencies involved because of their stake in the area were the Hampton Roads Sanitation District, the U.S. Army Corps of Engineers, and Newport News City Schools. On January 18, 1989,

during a scheduled meeting of the City Planning Commission, a progress report of the planning effort was made and the Commission provided valuable input and direction at that meeting.

Creation of the plan has been an open process where the informal input received from interested citizens has been valuable. In addition, there has been substantial public discussion over the past several years regarding specific issues in the planning area. This "collective memory" has also been used to help shape the plan. The climax of the participation effort was the community meeting held on March 13, 1989, at B.C. Charles Elementary School, at which time the conceptual plans were presented and discussed. This event was attended by over 130 citizens.

COMMUNITY INPUT

The participants provided the overall vision for the plan as well as necessary information and ideas to make that vision become a reality. Input to the plan was directed to the plan components of Parks and Recreation, Seafood Commercial and Industrial, City Farm, Wastewater Treatment Plant Expansion, Dredge Deposit, Landfill Reclamation, Residential, Natural Areas and Environment, and Streets and Utilities. Input was also received regarding implementation.

Parks/Recreation Use of the City Farm land for park and recreation has been identified as a top priority throughout the process. A major park is desired, and it was made clear that the community wants none of the public land sold for private development. Facilities for a variety of active recreational uses are desired, as well as areas and environments for passive recreation. The idea of retaining a "farm park" was supported. The golf course proposed in 1977 was raised as a development alternative. The number one priority expressed was for public access to the riverfront. The need for careful design of the park facilities was expressed along with the necessity of involving citizens in that design process.

Provisions for pleasure boating were also discussed. Excavation of a recreational harbor as shown in a concept alternative was supported. The consensus was that Deep Creek Harbor should retain facilities for working boat use and that the area along the Warwick River shoreline of the City Farm is better suited for non-power boat use.

Seafood Commercial Strong support was expressed for protecting and enhancing the seafood industry here and building up Newport News' share of the market. Existing marina lands should remain in this use with no further conversion to residential. The idea of a cooperative seafood market open to the public as well as wholesalers was enthusiastically supported.

City Farm In keeping with the desire to provide public access to the river front, relocation of the City Farm away from the river was a clear priority. Many comments were made in support of allowing a City Farm facility on a less valuable location on the City Farm property as shown in the land use concepts. The City Farm was called a good neighbor by adjacent residents. However, concern about the compatibility of this facility with public uses was also expressed. The idea of a regional minimum security prison facility was indicated as an alternative. There is a need for immediate planning for a new facility.

The police functions, firing range, vehicle impoundment, and kennel, currently on City Farm property, were also discussed. The residents expressed a desire to move all of these facilities to another location. The waterfront area which they occupy is seen as too valuable for such uses and there are noise and safety concerns regarding the firing range adjacent to public lands and residential neighborhoods.

Wastewater Treatment Plant Expansion Comments indicated support for the expansion as shown in the land use concepts, because of the serious need to improve water quality. Concern regarding noise, odor and environmental impacts of this facility were expressed.

Dredge Deposit The consensus was for release of the existing dredge spoil disposal easement in support of a reusable dredge spoil deposit on the landfill as shown in a concept alternative and that care must be taken to minimize and reduce any impacts on the community.

Landfill Reclamation Support was expressed for the reclamation and future passive recreation use of the landfill in addition to the reusable dredge deposit site. Residents of the neighborhood adjacent to the landfill on the north expressed the desire for adequate buffering from the landfill.

Residential Protection of existing residential neighborhoods in Deep Creek/Menchville was another high priority expressed. One of the strongest messages from the meetings was that no further rezonings for additional residential uses should occur. Retention of the single-family character of the area, without intrusion of multi-family residential development, is also desired. Preservation of Deep Creek/Menchville's unique history in the development of the area was voiced as a priority of residents.

Natural Areas/Environment Protection and clean up of the area's waters, wetlands, and other environmental assets was another area of consensus. Providing for public enjoyment of these natural areas in a manner compatible with their protection is also desired. Designation of natural areas as shown in the land use concepts was supported.

Streets/Utilities The need to upgrade existing streets and storm water facilities was expressed, as well as the need for proper planning to ensure adequate capacity to support new as well as existing uses. The extension of Lucas Creek Road into the area as a loop through the Waterfront Park to Menchville Marina, as shown in one of the concept plans, was well received. The concept, however, is not feasible if the new recreational harbor is developed.

Implementation The community expressed a strong desire for involvement in the various implementation projects of the plan. It was also made clear that implementation of plans for the area are a high priority to the community in this part of Newport News and that plans for financing should be developed and moneys allocated soon.

NET RESULTS

The staff of the Department of Planning and Development have synthesized the many factors involved into a viable plan. The Deep Creek/Menchville Plan is an articulation of those concerns, desires, and ideas that the community has expressed to the planners. By involving themselves in the planning process,

the people of Deep Creek/Menchville have ensured that this is their plan. They have a large stake in seeing that it becomes reality.

COMMUNITY GOALS

Goals represent directions for the future and reflect community desires. They serve as the basis for courses of action and for strategies for achieving desired ends. Each community area will have its own goals in response to its specific needs. The following goal statements were derived through interaction with the many participants in the planning of Deep Creek/Menchville.

- UTILIZE MENCHVILLE'S LARGE AREA OF PUBLIC LAND TO CREATE A COMMUNITY PARK WHICH PROVIDES FOR PUBLIC ENJOYMENT OF THE RIVERFRONT AND NATURAL ENVIRONMENT, RETAINS THE QUIET COUNTRY CHARACTER OF THE EXISTING FARM, AND PROVIDES FOR A WIDE VARIETY OF ACTIVE AND PASSIVE RECREATION OPPORTUNITIES.

- PRESERVE AND ENHANCE DEEP CREEK HARBOR'S HISTORIC ROLE AS THE WORKING HOME OF THE JAMES RIVER OYSTER/SEAFOOD HARVESTING INDUSTRY THROUGH PROVISION OF OPTIMAL FACILITIES FOR MARKET AND DISTRIBUTION, MARINE STORAGE AND SERVICE, AND INDUSTRY SUPPORT.

- TAKE MAXIMUM ADVANTAGE OF THE ECONOMIC POTENTIAL OF THE DEEP CREEK SEAFOOD INDUSTRY.

- MAINTAIN THE LOW DENSITY, SEMI-RURAL, RESIDENTIAL CHARACTER OF DEEP CREEK/MENCHVILLE AND PRESERVE THE AREA'S HISTORIC QUALITY.

- PROTECT AND RESTORE THE RICH BUT FRAGILE NATURAL ENVIRONMENT OF DEEP CREEK/MENCHVILLE, INCLUDING ITS WETLANDS, FORESTS AND WATERS.

- RELOCATE THE CITY FARM MINIMUM SECURITY DETENTION FACILITY IN A MANNER COMPATIBLE WITH NEARBY RESIDENTIAL AND OTHER USES, WHILE CREATING A MORE FUNCTIONAL FACILITY AND RETAINING ITS COMMUNITY SERVICE CAPACITY AND ITS REHABILITATION OF INMATES THROUGH CONSTRUCTIVE TRAINING AND WORK.

- ENSURE WASTEWATER TREATMENT TO A LEVEL WHICH ELIMINATES CHEMICALS, I.E. CHLORINE, IN ORDER TO PREVENT HARMFUL IMPACTS ON THE SEAFOOD PRODUCTIVITY OF THE JAMES RIVER AND ITS TRIBUTARIES.

- PROVIDE FOR THE EXPANSION OF THE JAMES RIVER WASTEWATER TREATMENT PLANT TO INCREASE ITS CAPACITY AND IMPROVE WATER QUALITY IN A MANNER WHICH MAKES THE MOST OF THE VALUABLE RIVERFRONT AND IS MOST COMPATIBLE WITH NEARBY RESIDENTIAL AREAS.

- DEVELOP A SUITABLE ALTERNATIVE TO THE CITY FARM DREDGE DISPOSAL SITE AND OBTAIN THE RELEASE OF THE EXISTING SITE FROM THE U.S. ARMY CORPS OF ENGINEERS.

- RECLAIM THE MENCHVILLE LANDFILL FOR PASSIVE PARK AND OTHER APPROPRIATE USES AND IMPROVE ITS VISUAL AND ENVIRONMENTAL CHARACTERISTICS.

- PROVIDE ADEQUATE INFRASTRUCTURE, INCLUDING STREETS, WATER, SANITARY AND STORM SEWER UTILITIES TO SERVE EXISTING AND FUTURE NEEDS.

EXISTING CONDITIONS

PLANNING AREA

The Deep Creek/Menchville Planning area is located in the Midtown section of the City of Newport News at the confluence of the Warwick River and Deep Creek. The area overlooks the James River about 10 miles northwest of Hampton Roads.

The western boundary of the planning area follows the centerline of Flax Creek between Denbigh Plantation Subdivision and the City Farm and Hampton Roads Sanitation District (HRSD) properties. The north boundary follows Youngs Road and the north property line of the closed City landfill. The east boundary line includes the properties adjacent to the shoreline of Deep Creek down to Harris Road and Deep Creek Road. The south boundary includes the properties along Deep Creek Road and extends along the shore of the Warwick River back to Flax Creek. The formal planning area is shown on the "Planning Area" map.

The planning area contains approximately 750 acres of land and water. 74 percent of this total, 557 acres, is located on the Menchville side of the harbor, while 16 percent, 123 acres, are on the Deep Creek side. The waters of Deep Creek Harbor and the creeks feeding it make up another 70 acres, which is 10 percent of the area (see Table 1).

Table 1 - Planning Area

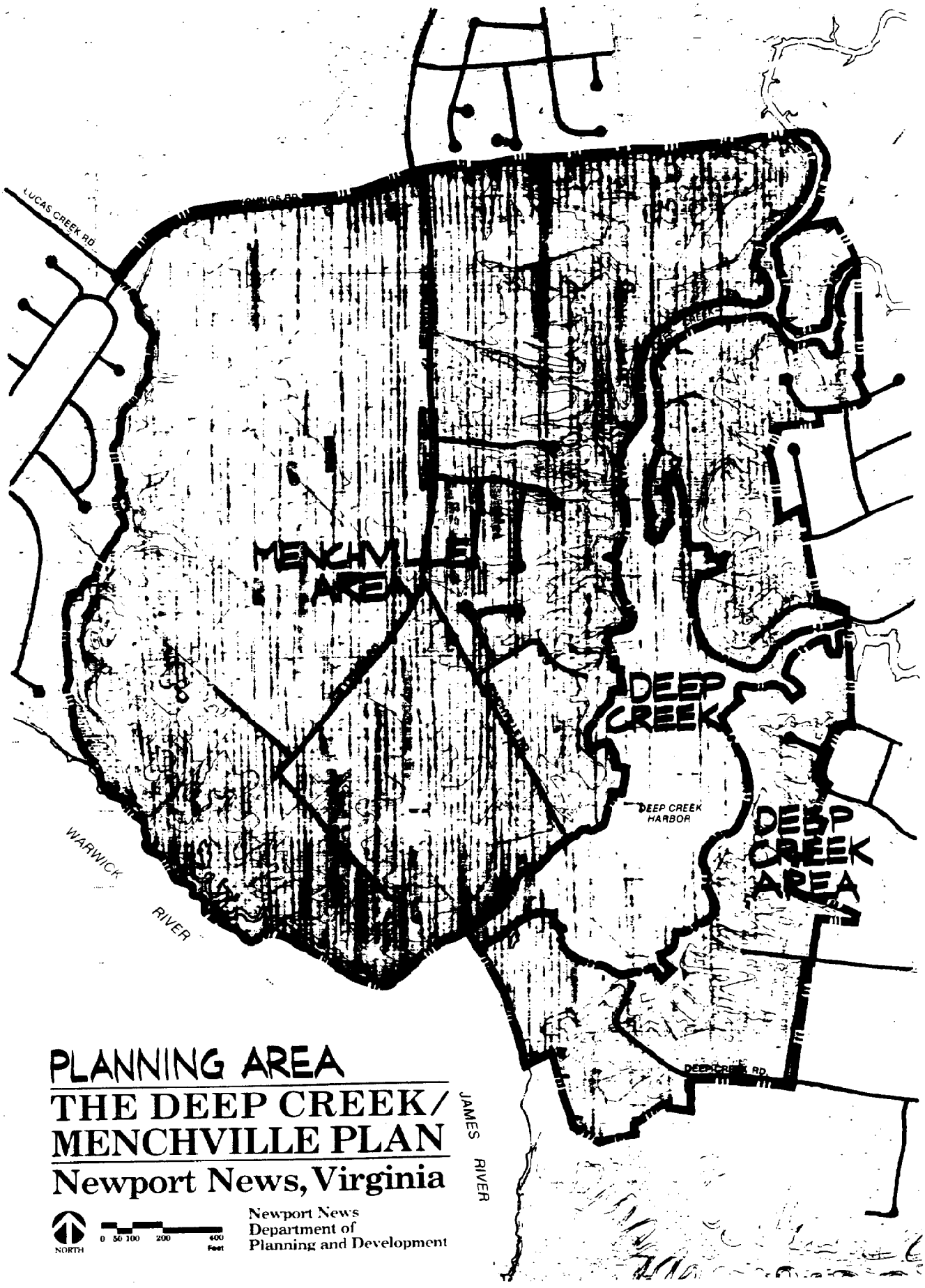
	Acres	Percent
Menchville Area	556.72	74.25%
Deep Creek Area	123.04	16.41%
Water (Deep Creek and tributaries)	70.00	9.34%
TOTAL AREA:	749.76	100.00%

EXISTING LAND USE

The most predominate land use is the 360 acres of agricultural land associated with the City Farm. The facilities at the City Farm, including its minimum security detention facility, administrative and support facilities, and the police firing range, canine division, and vehicle impoundment area make up approximately 11 acres. The closed Menchville landfill contains 47.5 acres, while the HRSD wastewater treatment plant and a sewer pump station site make up public utilities land totaling 17.4 acres. Built residential land makes up about 107 acres of the area. The marine-related uses of seafood sales and marine service included in the Menchville, Harborview and James River Marinas, and the public pier total 12 acres. The Warwick Yacht Club, classified as recreational use, contains just over 8 acres. About 1.5 acres is devoted to Herman's Harbor House Restaurant. Nearly 54 acres of the area are vacant and nearly 48 acres are wetlands. Street right-of-way makes up about 14 acres of the planning area. The mix of land uses in the planning area is outlined in Table 2 and shown on the "Existing Land Use" map.

Table 2 - Existing Land Use

LAND USE	MENCH-VILLE ACRES	DEEP CREEK ACRES	TOTAL	PERCENT
Agriculture	360.00	0.00	360.00	48.02%
Landfill	47.55	0.00	47.55	6.34%
Marine Service	5.00	2.04	7.04	0.94%
Prison Farm	10.81	0.00	10.81	1.44%
Public Utility	17.39	0.00	17.39	2.32
Recreation	0.00	8.14	8.14	1.09%
Restaurant	0.00	1.56	1.56	0.21%
Seafood Sales	5.06	0.00	5.06	0.67%
Single Family Residential	40.67	66.22	106.89	14.26%
Street	11.12	3.06	14.18	1.89%
Vacant	38.84	14.72	53.56	7.14%
Water	35.00	35.00	70.00	9.34%
Wetlands	20.28	27.30	47.58	6.35%
T O T A L	591.72	158.04	749.46	100.00%


LUCAS CREEK RD.
OWINGS RD.
MENCHVILLE LAKE
DEEP CREEK
DEEP CREEK HARBOR
DEEP CREEK AREA
WARWICK RIVER
JAMES RIVER
DEEP CREEK RD.
PLANNING AREA
THE DEEP CREEK/ MENCHVILLE PLAN
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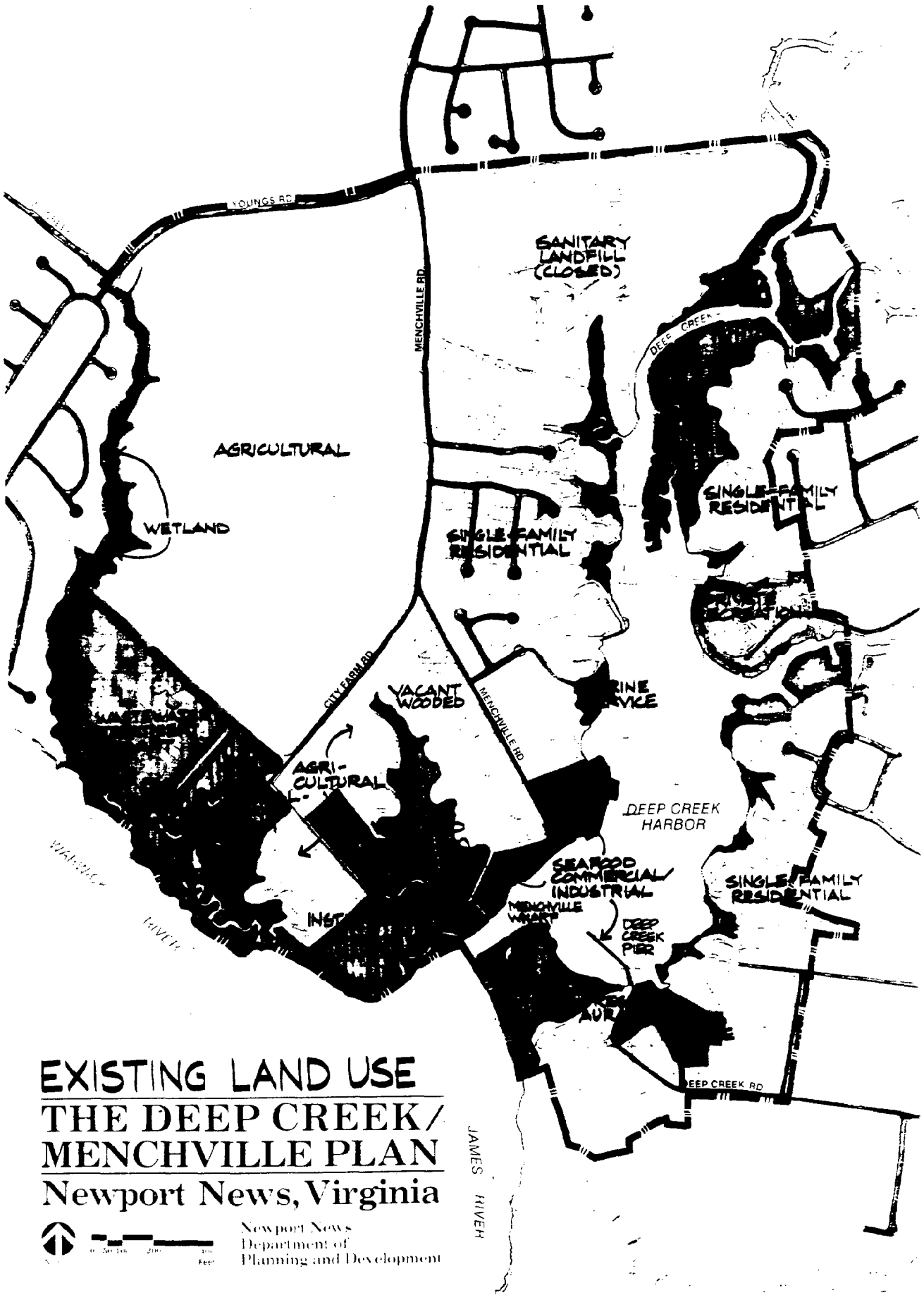

EXISTING LAND USE
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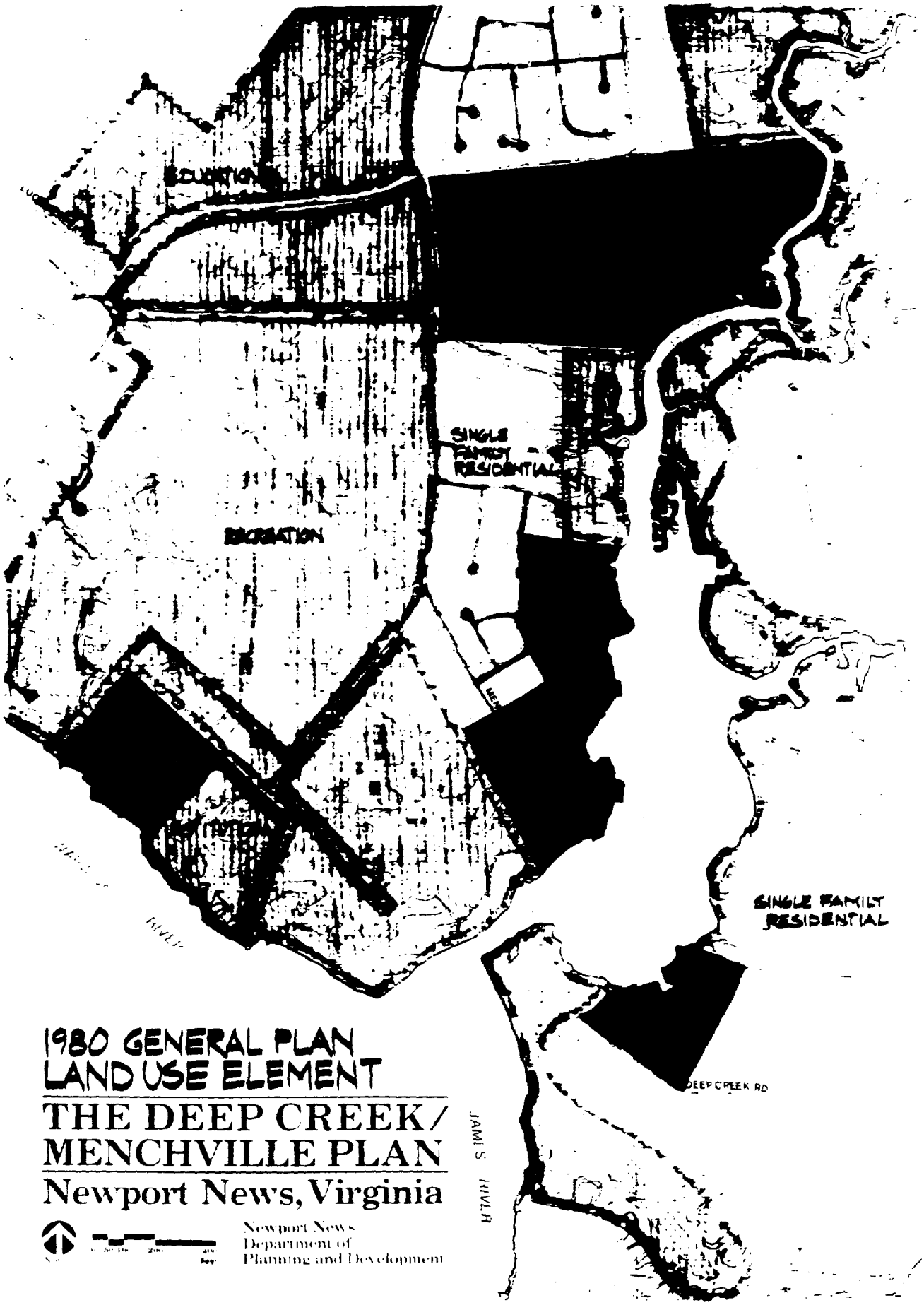

1980 GENERAL PLAN LAND USE ELEMENT

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ADOPTED GENERAL PLAN/LAND USE PLAN

The existing General Plan/Land Use Plan was adopted in 1980. It includes a range of land use designations in the planning area as shown on the "1980 General Plan/Land Use Plan" map. The majority of City Farm land and the wetlands areas along the creek and harbor are designated "recreation." Existing residential areas fall under the "single-family residential" land use designation. A relatively small area housing some City Farm facilities is designated as "government/educational/institutional." This designation is also assigned to land on both sides of Youngs Road, including the Menchville High School and B.C. Charles Elementary School grounds. The "Commercial" land use designation is placed on significant areas adjacent to the Harbor. The existing marine facilities are contained within these areas, but much of the commercially designated land has actually been converted to residential use and zoning in recent years. Finally, the HRSD waste water treatment plant and the landfill are included under the "industrial" designation.

A comparison of existing land uses and the desired land use of the General Plan indicates that the plan has often not been followed as a guideline for the development of the Harbor area. Actual land use since the Plan's adoption has moved away from, rather than closer to, the designations of the Plan for the Deep Creek Harborfront. Significant commercially designated land on the Harbor has been developed as residential.

EXISTING ZONING

Table 3 outlines the existing zoning of the planning area. Of the total area, 94 percent, or 640.5 acres, is currently zoned for residential development. All but 7.4 acres of this is zoned for single-family residential (R1 or R1-B). The 7.4 acres zoned for multi-family residential (R2-C) is a portion of the Harborview Marina that was rezoned from light industrial (M-1) in July 1988. Light Industrial (M1) is the only other zoning designation existing in the study area. There are 25 acres located in the M1 zone here which includes the marine operations and yacht club on the harbor. Existing zoning is shown on the "Existing Zoning" maps.

There are several inconsistencies between current zoning and actual and designated land use.

The City Farm, Landfill, and HRSD Wastewater Treatment Plant are all located on land zoned R1-B, single family residential. None of these uses would be permitted by right under their current zoning. The M-1 industrial zone would be more appropriate for the wastewater treatment plant. Zoning of the landfill should reflect its future designated uses.

The M-1 industrial zone designation of the Marinas and Warwick Yacht Club is the necessary zoning district for the heavier boat repair and seafood handling activities associated with these uses. However, this designation allows a full range of manufacturing and non-water-related industrial uses that by right could replace the exiting appropriate uses. A specific water-related commercial/industrial zone would be more appropriate for the marina areas. A change in the marina zoning was recommended by the 1980 Land Use Plan and the current update.

There are four residences located on the M-1 industrial land of the Deep Creek/James River Marina. Residential uses are not permitted in the M-1 zone. However, these residences were constructed prior to adoption of the current zoning code and are considered legal non-conforming uses. Therefore, a special exception would be required prior to the issuance of any permit for improvement or enlargement of these structures. If they are demolished or remain vacant for more than two years, subsequent use of this land must conform to the M-1 zone.

The residential zoning in the vicinity of the harbor in Menchville is on land designated commercial by the existing General Plan/Land Use Plan.

Table 3 - Existing Zoning

ZONING DISTRICT	MENCH-VILLE	DEEP CREEK	TOTAL	PERCENT
M1 (Light Industry)	7.39	14.46	21.85	2.91%
M1/R2C (Light Ind./Apartment)	8.80	0.00	8.80	1.17%
R1 (S.F. 3.63 Units/Acre)	0.00	99.40	99.40	13.26%
R1B (S.F. 4.84 Units/Acre)	527.61	6.12	533.73	71.19%
R2C (Apartment 30-34 Units/Acre)	1.80	0.00	1.80	0.24%
Street	11.12	3.06	14.18	1.89%
Water	35.00	35.00	70.00	9.34%
Total:	591.72	158.04	749.76	100.34

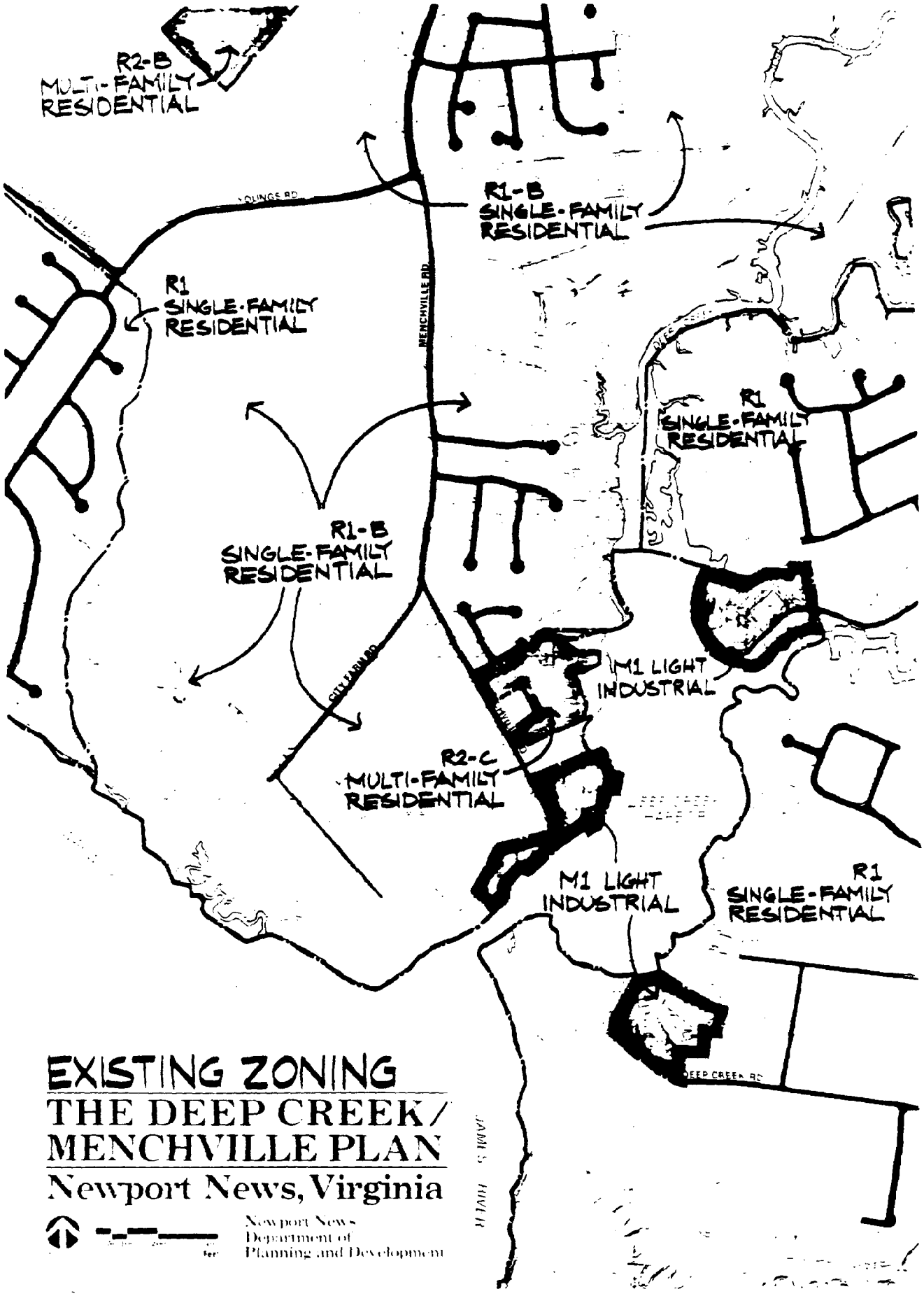
DEVELOPMENT HISTORY

Until recently, development in the Deep Creek/Menchville area consisted almost exclusively of large rural scale lots interspersed with agricultural and forest lands. This area had been relatively untouched by suburban and urban scale development until the past 3 years. Since 1986, over 150 dwelling units have been constructed or approved, a 175 percent increase over the 85 units previously existing. This rapid residential development has altered the rural character of the area.

The residential land within the planning area is composed mainly of semi-rural lots and low density single family subdivisions. There are three new residential subdivisions all located in Menchville: Waterview Estates, developed in 1986 with a density of 2.7 units per acre; Harborview Estates, developed in 1988 with a density of 3.5 units per acre; and the recently approved Marina View condominium project, with a density of 10.4 units per acre. The older subdivision of Lawndale Farms, also in the planning area, was developed in 1958 with a density of 2.5 units per acre.

The existing single family homes along Menchville Road have been developed since 1930, with only one new home built since 1972.

On the southern shore of Deep Creek are several older residential subdivisions: Warwick Pines, developed in 1948, has a density of 1.5 units per acre; Burcher Point, developed in 1956, with a density of 3.8 units per acre; Holly Bank, developed in 1959, with a density of 1.29 units per acre, and Willard Place, developed in 1969, with a density of .8 units per acre.



EXISTING ZONING
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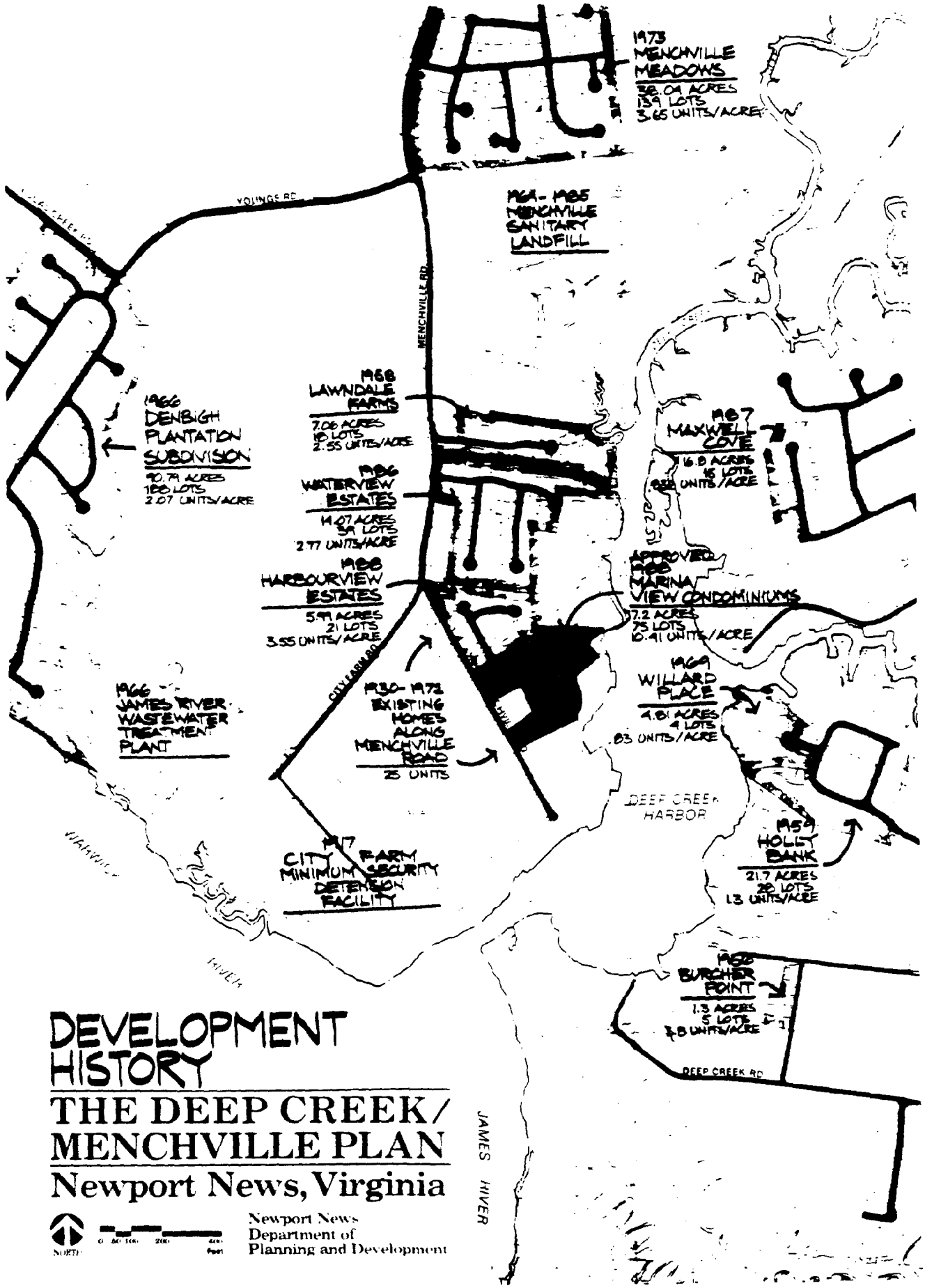

DEVELOPMENT HISTORY

THE DEEP CREEK/ MENCHVILLE PLAN

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West of the planning area is the older subdivision of Denbigh Plantation, which was developed in 1966 with a density of two units per acre, and the new subdivision of Plantation West, which was developed in 1988 with a density of 1.4 units per acre.

DEVELOPMENT POTENTIAL

The area's current potential for new development is based on the type and intensity of development called for by the existing policy and regulatory documents applicable to the property, namely the City's adopted General Plan/Land Use Plan and the Zoning Code.

The 1980 General Plan/Land Use Plan calls for the area to be developed primarily as recreational, with a mix of residential, commercial, institutional, educational, and industrial uses as shown on the "1980 General Plan/Land Use Plan" map. Although it speaks of the type of development, the General Plan does not address development intensity, except in the case of residential; "single-family" generally meaning low density residential development.

The Zoning Code specifically defines intensity as well as type of development. Potential new development in the planning area based on existing zoning is analyzed as follows.

All vacant, undeveloped land in the planning area is currently zoned residential, except for the vacant portions of the Menchville Marina area which are zoned industrial. In addition to development of this vacant land, significant development could take place as infill among already developed lots in the area. Parcels of two or more acres could be subdivided to create this infill development. Also, smaller parcels could be combined and resubdivided, although this would not create a significant increase in the total number of lots. Developable parcels are shown on the "Development Potential" map, and their development potential is outlined in tables 4A through 4C.

There are seven privately-owned vacant parcels of two or more acres located in the planning area. These parcels total 34 acres and could be developed with approximately 255 total residential dwelling units under the density allowed by the current zoning.

In addition, the planning area contains 11 private parcels of two or more acres which have only one dwelling unit. These lots, which total 37 acres, have the potential to be further subdivided. If this were to occur, 133 new units could potentially be built on these parcels.

The remainder of the potentially developable land in the area is part of the City Farm property which contains approximately 418 acres. Given its R1-B zoning, this land, if developed as residential, could be built out with up to 2,025 dwelling units.

The above figures are based solely on density allowed by the Zoning Code. Wetland area has been removed from the acreage figures used to calculate development potential, but subdivision layout and other site characteristics of the individual parcels would affect the actual number of units individual parcels could contain. However, it is clear that significant development

potential exists in the Menchville/Deep Creek Harbor area. A total of 388 new dwelling units are currently allowable on privately owned land. Including the publicly-owned land, 2,413 total new units could be developed.

This analysis shows only the development potential based on existing zoning, which calls for virtually all of the area to be residential. Other uses, in addition to residential, are called for in the City's Land Use Plan and, indeed, already exist in the planning area. Actual future development should be based on the community's desired future for the area as articulated in a community-based plan. Zoning and other development regulators are tools which should be designed to implement such a plan.

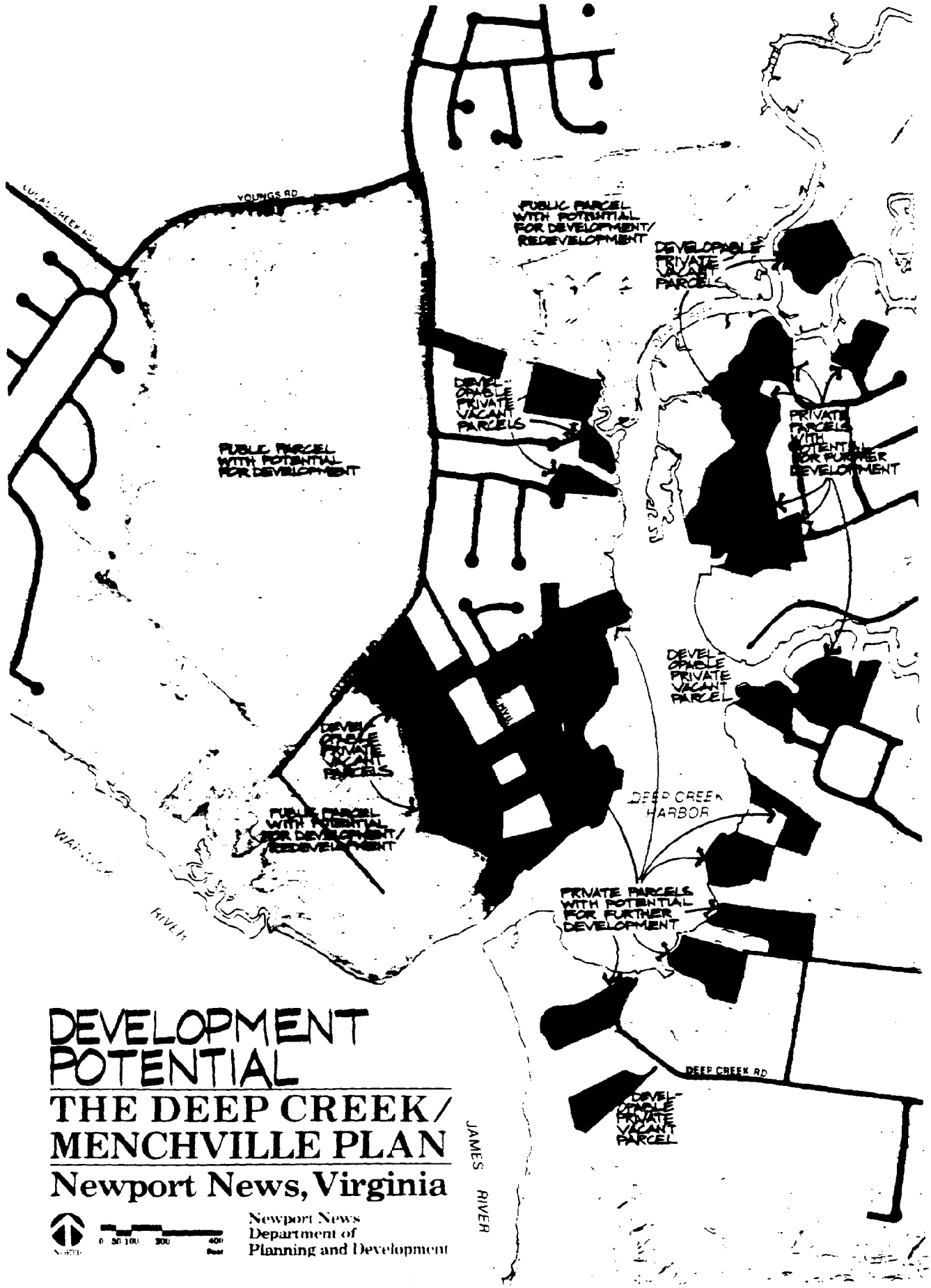
Table 4 - Development Potential

A. Private Developable Parcels
(Private Vacant Parcels of Two or More Acres)

Number of Parcels	Zoning	Allowed Density (Units/Acre)	Acreage*	Maximum Potential Units
1	R1B	4.84	15.76	76
2	R2C	32	5.58	179
1	M1	N/A	2.44	0
MENCHVILLE SUBTOTAL:			23.18	255
2	R1	3.63	4.43	16
1	R1B	4.84	6.12	30
DEEP CREEK SUBTOTAL:			10.55	45.70
TOTAL:			34.33	301

B. Private Parcels Available for Further Development
(Private Parcels of Two or More Acres With One Existing Dwelling)

Number of Parcels	Zoning	Allowed Density (Units/Acre)	Acreage*	Maximum Potential Units	Existing Units	Maximum Potential New Units
MENCHVILLE:						
3	R1B	4.84	7.10	34	3	31
DEEP CREEK:						
8	R1	3.63	30.12	109	8	101
T O T A L:			37.22	144	11	133



DEVELOPMENT POTENTIAL

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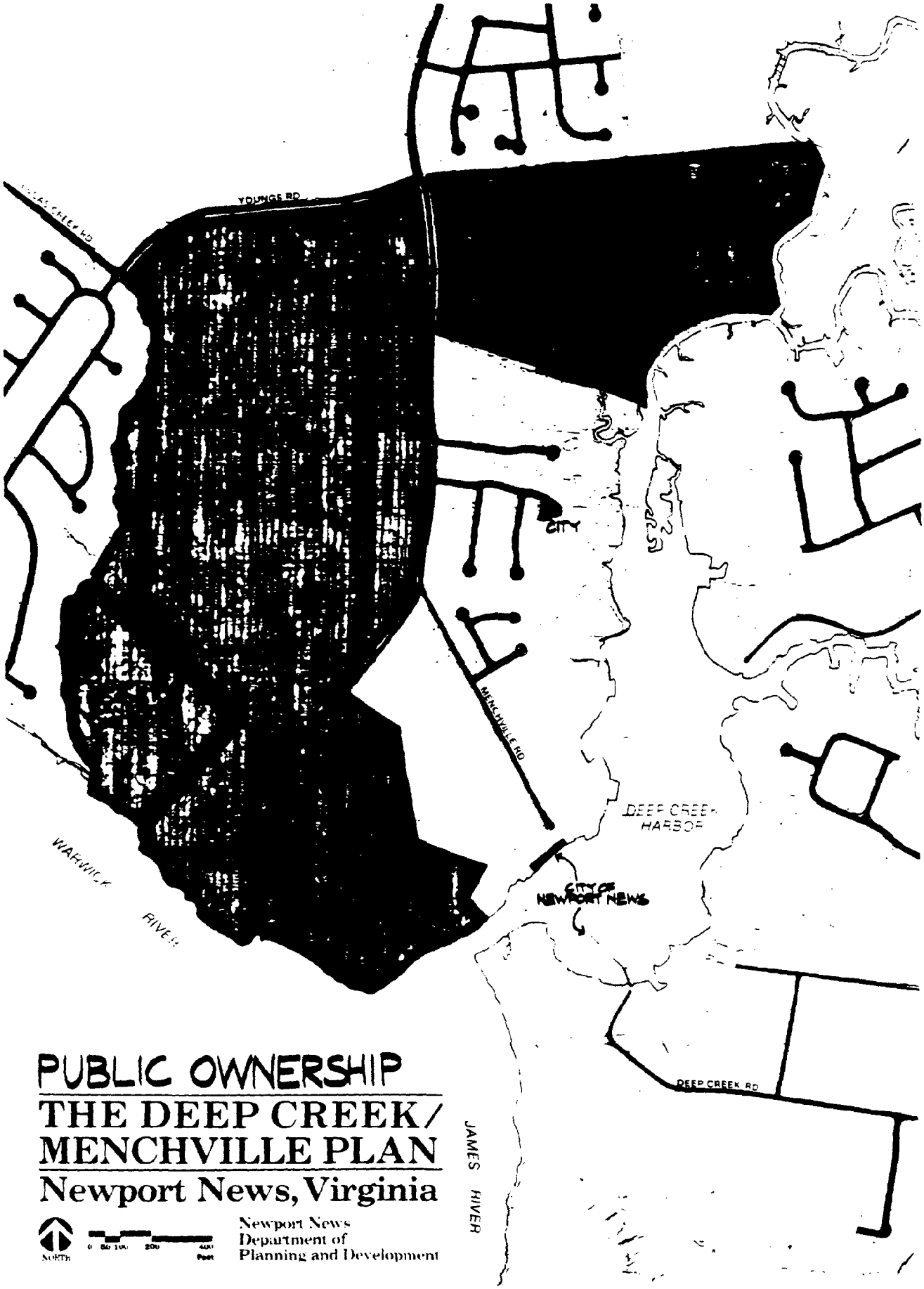

PUBLIC OWNERSHIP

THE DEEP CREEK/ MENCHVILLE PLAN

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C. Public Parcels Available for Development/Redevelopment

Number of Parcels	Existing Use	Zoning	Allowed Density	Acres*	Maximum Potential Units
1	City Farm	R1B	4.84	370.81	1,795
1	Landfill	R1B	4.84	47.55	230
T O T A L:				418.36	2,025

*Wetlands not included in parcel acreage

OWNERSHIP

One of the key features of the Deep Creek/Menchville area is the extensive amount of publicly-owned land. 436 acres, which amounts to 65 percent of the planning area, is owned by the City of Newport News (see Table 5). The extent of public land in the planning area is shown on the "Public Ownership" map.

This land presents a significant opportunity. Most of it is contained within the City Farm, which remains primarily in agricultural use. When the correctional facility was established in the early 1900's, it was part of rural Warwick County. Rapid growth over the past quarter century has left the farm as an island surrounded by suburban development. The closed Menchville Landfill makes up 54 acres of City-owned land adjacent to the City Farm. It has potential for future passive recreation as well as other uses.

The value of this pocket of undeveloped land is heightened as Newport News nears complete development of its total land area, which at current growth rates will occur within the next 20 years. This land represents probably the only remaining opportunity for a badly needed major park in this highly populated area of the City.

The number-one asset of this land is its location on the waterfront. The City Farm property has over one-half mile of shoreline along the Warwick River overlooking the James River, while the landfill property has one-half mile along Deep Creek at the head waters of Deep Creek Harbor. Currently less than one and three-fourths miles of the City's 42-mile shoreline along Hampton Roads and the James and Warwick Rivers is accessible to the public.

Table 5 Ownership

Ownership	Menchville	Deep Creek	Total	Percent
Public Owned	453.54	0.09	453.63	60.50%
Private Owned	92.06	119.89	211.95	28.27%
Street	11.12	3.06	14.18	1.89%
Water	35.00	35.00	70.00	9.34%
	591.72	158.04	749.76	100.00%

ENVIRONMENT

The Deep Creek/Menchville area contains a rich natural environment. Features of this environment include wetlands, forests, a variety of vegetation, wildlife habitat, and the waters and shoreline of the Warwick River, Deep Creek and its tributaries. The environment contains areas subject to some natural hazards, including steep slopes, erodible soils and flood plains. The Deep Creek/Menchville environment, including its water quality, is being impacted by a variety of factors. Analyses of this environment are detailed more fully in the Environmental Analysis for Deep Creek/Menchville, conducted as part of this planning effort.

VEGETATION

Both aquatic and non-aquatic vegetation is found in the planning area. Aquatic vegetation is found in the tidal wetlands which abut or are located within the planning area and the Deep Creek Drainage Basin. The most common types and percentages of vegetation are:

Table 6 Vegetation

Type	Percent
Saltmarsh Cordgrass	51.00%
Salt Meadow Grasses	8.20%
Black Needlerush	5.00%
Saltbushes	2.20%
Big Cordgrass	25.00%
Saltmarsh Bulrush	.76%
Water Hemp	1.00%
Cattails	.84%
Marsh Hibiscus	4.00%
Marsh Mallow	.25%
Reed Grass	1.00%
Common Threesquare	.08%
Pickerelweek-Arrow Arum	.25%
Smartweed	1.30%

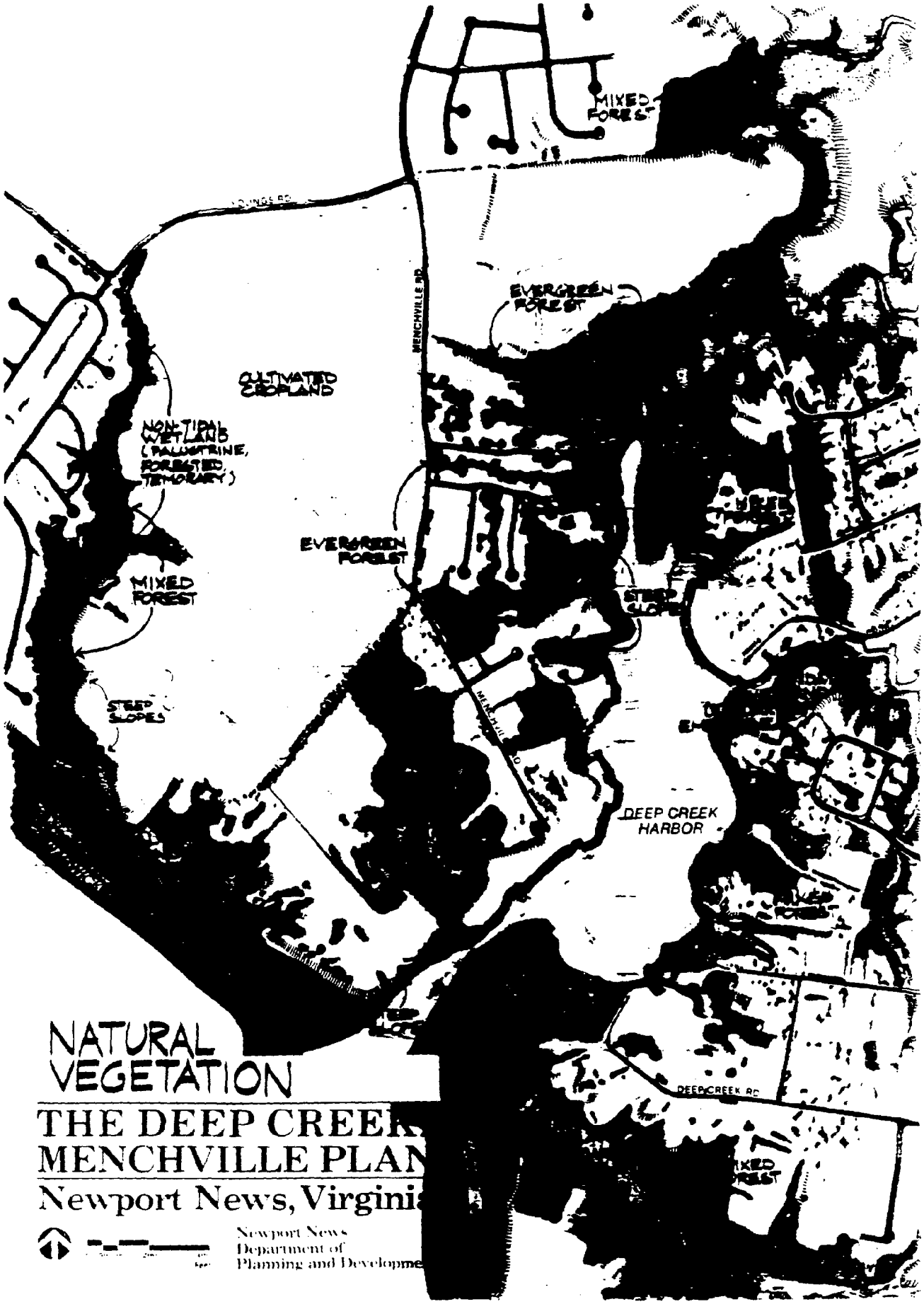
Aquatic vegetation separately, and in combination, deters shoreline erosion, serves as a sediment trap, assimilates and absorbs flood waters, and provides habitat for a variety of wildlife and fish.

Vegetation in the planning area can be grouped as follows: Mixed pine and hardwoods, pine/evergreen forestland, croplands/cultivated fields, and tidal marsh/salt meadows. The locations of these vegetation groups are shown on the "Natural Features" map.

Non-aquatic vegetation, especially on steep slopes, prevents soil erosion and slows the movement of sediments down slope. Natural vegetation provides better soil erosion protection than transplanted trees, shrubs, and/or grass planted during the development process. Thus, retention and restoration of vegetation on steep slopes is advisable.

SIGNIFICANT HABITATS

Significant habitats are those which are commonly inhabited by endangered or rare species.



NATURAL VEGETATION

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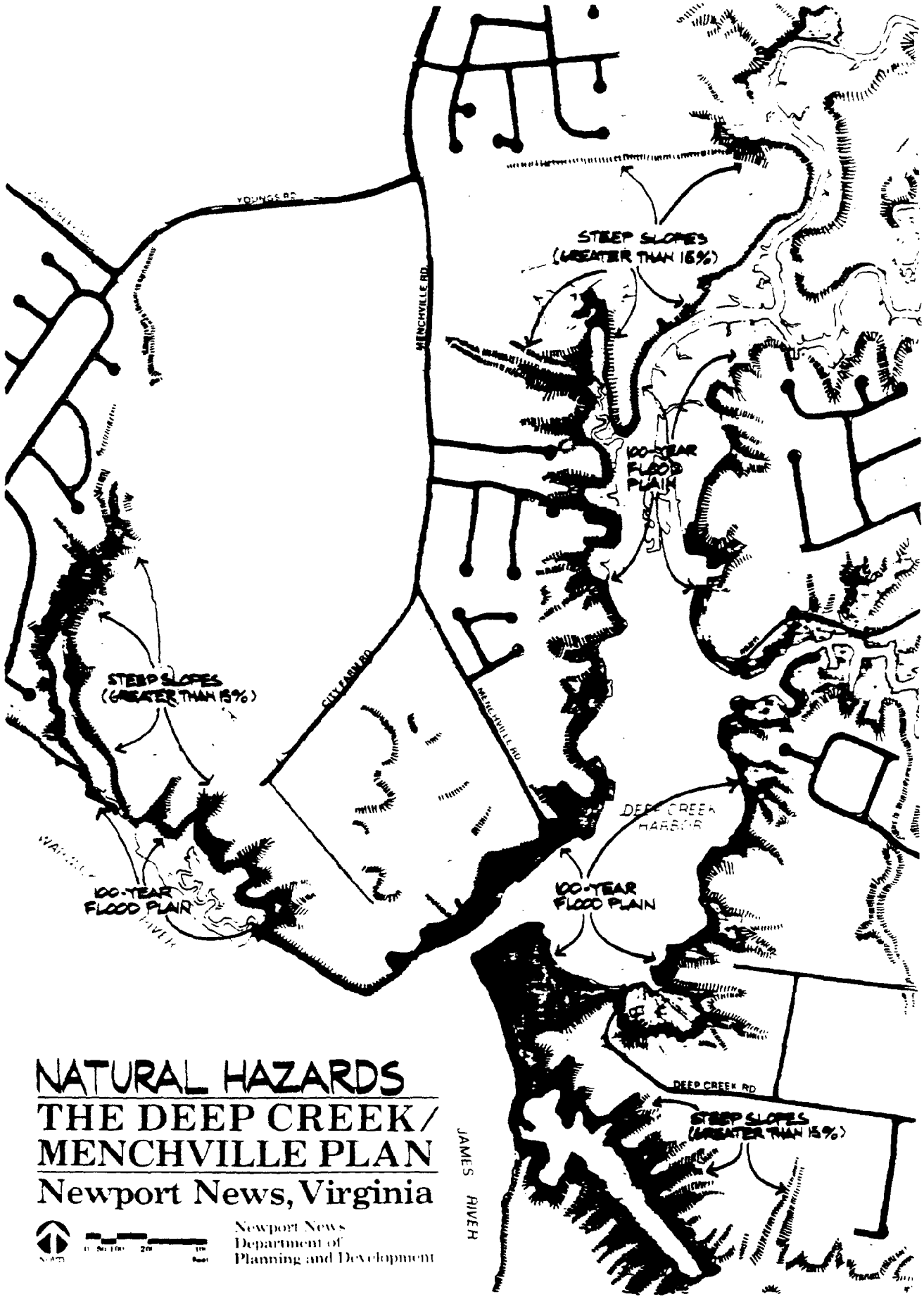

NATURAL HAZARDS
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The Virginia Natural Heritage Program maps an inventory of rare and endangered plant and animal species by location. Although no populations of rare, threatened, or endangered species have been documented in the planning area, the habitat for such species does exist here.

The list of species known to occur in the Newport News area includes 27 fish, 31 amphibians, 23 reptiles, 157 birds, and 39 mammals. Of these species, 18 are considered rare and one endangered. The one endangered species of special status in the area is the American Peregrine Falcon.

The most significant wildlife habitat in Deep Creek/Menchville is the wetland/marsh vegetation group. According to the Virginia Department of Game and inland fisheries, this vegetation group provides habitat for 178 species, including the American Peregrine Falcon.

The waters of Deep Creek and its tributaries serve as habitat for the juvenile state in the marine life cycle of several varieties of fin fish and shell fish. The quiet waters and sheltered marshes of this habitat provide the food sources, safety and other factors which create the most productive estuaries for marine life.

WETLANDS

Wetlands are initially divided into two classifications, tidal or non-tidal, and are further identified by their dominant type of vegetation. Both tidal and non-tidal wetlands perform a variety of vital functions. They provide a rich habitat for finfish and shellfish and a food source for water fowl and aquatic organisms. They also act as a filtering system for sediments carrying nutrients and toxic substances, and as a buffer to wave action against the shoreline.

The planning area contains approximately 50 acres of wetlands which are shown on the "Natural Features" map. An inventory by the Virginia Institute of Marine Science (VIMS) in 1977, identified 24 marsh locations in Deep Creek and in the Warwick River adjacent to the City Farm.

STEEP SLOPES

Steep slopes are generally considered those rising at a rate of 15% or greater. Slopes of 15% or above can introduce sediment into the aquatic ecosystem due to gravitational forces alone. Lack of vegetation and the presence of highly erodible soils combined with steep slopes, creates a highly erosive situation.

Steep slopes line the shore of Deep Creek and its tributaries, and the eastern shore of the Warwick River in the planning area. The steepest slopes are found along the bluff at the confluence of the Warwick River and Deep Creek, adjacent to the City Farm detention facilities. Steep slopes are shown on the "Natural Hazards" map.

FLOODPLAIN

The 100 year floodplain of Deep Creek ranges in elevation from 8.5 feet in the upper reaches to 10 feet in the Harbor. The floodplain encompasses tidal and non-tidal wetlands, as well as tidal and non-tidal shorelines. There are several structures built within the Deep creek floodplain including James River Marina, Keefer Marine Service, Herman's Harbor House Restaurant, and four buildings at Menchville Marina.

The 100 year floodplain of the Warwick River within the planning area ranges in elevation from 8.5 feet in the Flax Creek area between Denbigh Plantation and the City Farm to 12 feet along the shoreline west of the City Farm. The only structure built within the floodplain is a vacant structure associated with the City Farm. The floodplain is also shown on the "Natural Hazards" map.

WATER QUALITY

Deep Creek drains into the Warwick River which flows into the James River. The James River is a tributary of the Chesapeake Bay. Thus, the water quality of Deep Creek is of regional importance and is within the jurisdiction of the Chesapeake Bay Preservation Act.

Water quality is generally affected by three pollutants: sediments, nutrients, and toxic substances. Sediments are the product of erosion which are conveyed through stormwater runoff into surface water. While in suspension, sediment can block sunlight needed by aquatic vegetation which provides a habitat for marine life. It also absorbs the sunlight, causing the temperature of the water to rise, which threatens habitats for marine life. When sediment deposits on oyster beds it can smother them and eliminate the hard surfaces on which oysters set.

Nutrients in excess create an "algae bloom" which causes the water to become murky. In this stage it causes problems similar to sediment in suspension and deposition.

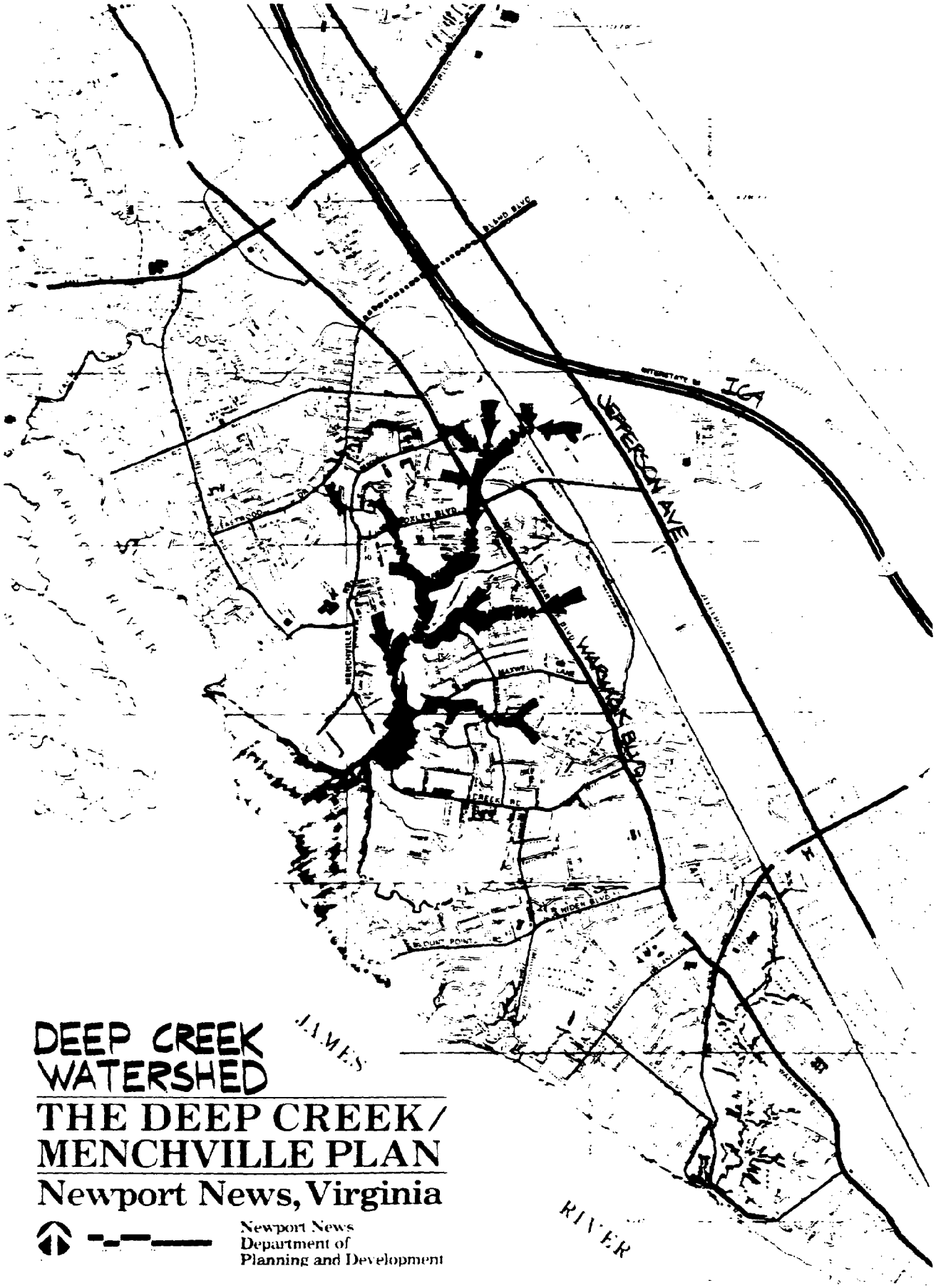
Toxic substances in the form of chemicals and heavy metals released into surface water can severely damage life forms in their immature stages. Toxics in the tissues of shellfish and finfish are related to the concentration of those materials in the surface water which poses a health threat to those consuming them.

In order to determine the current water quality characteristics of Deep Creek, Malcolm Pirnie, Inc. was contracted to conduct water, sediment and existing dredge spoil site testing during the winter of 1988/89. They also reviewed results from previous analyses of these waters.

The results of Malcolm Pirnie's analyses are contained in the report, "Environmental and Engineering Support Studies for Deep Creek Harbor Land Use Plan." Following is a summary of the findings from the analyses:

Deep Creek Surface Water The analysis found that water quality in Deep Creek harbor is similar to that of the James River. Organic compounds, with the exception of zinc on the flood tide, are below detectable limits in the water. Nutrients (phosphorous and nitrates) are within ranges reported for the James River. Only oil and grease are at slightly higher concentrations in Deep Creek.

Concentrations of some metals in historic water samples from upstream Deep Creek monitoring locations were elevated with respect to concentrations found at the harbor's mouth in the present sampling. Reported concentrations for the previously sampled upstream locations were high enough to have a detrimental impact on aquatic life. Further investigation would be required to determine if these values are representative of actual water quality conditions in this segment of Deep Creek, or if these results were due to sampling protocol.



DEEP CREEK WATERSHED

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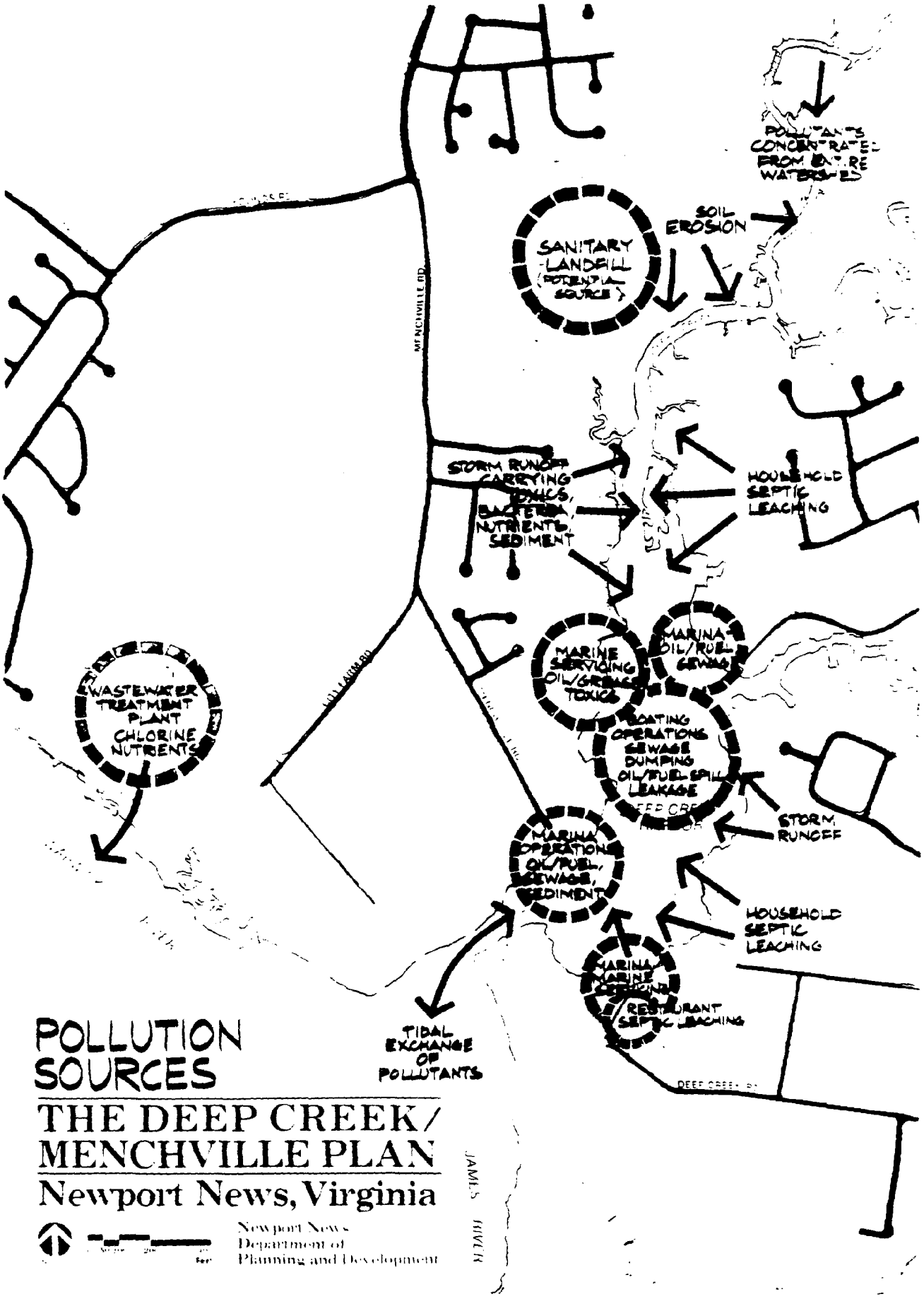

POLLUTION SOURCES

THE DEEP CREEK/ MENCHVILLE PLAN

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Deep Creek Sediments Concentrations of chemical compounds in the sandy sediments near the mouth of the Harbor were much lower than in the organic silty clay at the upstream location. While metal concentrations were high, they are still within ranges reported for the James River. Lead and mercury were particularly high. Both of these metals originate largely from non-point sources, including inflow from the James River during flood tide. Undoubtedly, activities associated with harbor operations and stormwater runoff are two potential sources of contaminants. Determining the magnitude of impact from these sources would require additional study.

Only one organic compound of concern was detected in Deep Creek sediments. This compound, Di(2-Ethylhexyl)phthalate, is a common pollutant often associated with PVC plastics. At the low levels measured, this compound should not have a detrimental impact on aquatic life. The only other compounds detected were carboxylic acids and a cyclic organosulfur compound. The organosulfur compound is probably natural in origin and the carboxylic acids would largely reflect inputs from faulty septic systems and restaurants. Landfill leachate and wastewater effluent may also be a source of these compounds.

Dredge Spoil An evaluation of the area used for previous disposal of Deep Creek dredge spoil shows sediments consisting of a very soft, organic-rich, silty clay with a maximum thickness between 15 and 20 feet. This material would not support a foundation for any permanent facility unless special engineering methods, such as pile supports, are used.

Chemical composition of the dredge spoil area sediments is very similar to the sediments at the upstream Deep Creek harbor sediment sampling location. Lead and mercury were at elevated concentrations in these sediments, although still well within ranges reported for the James River.

Organic compounds detected in the dredge spoil were Di(2-Ethylhexyl)phthalate, several carboxylic acids, and a cyclic organosulfur compound. All organic compounds were below levels of concern, and should not have a detrimental impact on human health or the environment.

POLLUTION SOURCES

There is one point source of pollution documented within the planning area. This is the James River Wastewater Treatment Plant, which has a discharge permit from the Virginia Water Control Board (VWCB). The Hampton Roads Sanitation District is in the process of updating their discharge permit and expanding this plant to meet new state regulations for reduction of nutrients and chlorine in its' effluent. Sources of point and non-point pollution are identified on the "Pollution Sources" map.

Within the study area the most common form of "non-point" source pollution is stormwater runoff. Stormwater runoff carries sediment contamination with toxics and nutrients into Deep Creek. One source of nutrients in stormwater runoff is from malfunctioning septic systems.

In July 1988, the Virginia Department of Public Health identified a number of malfunctioning septic systems in the Deep Creek Watershed. During rainy periods, several outbreaks of raw sewage from septic systems were documented. The poor suitability of the area's soils for septic systems contributes to septic problems here.

There are an estimated 850 septic systems in the Deep Creek Watershed. More than half of these have sanitary sewer currently available, but are not connected. Eighty percent will have sewer available after completion of several phases of sanitary sewer installation between 1989 and 1993.

The lack of operative marine vessel pump-out stations at marinas within Deep Creek Harbor creates another source of "non-point" pollution. Sewage dumping from working and pleasure boats is suspected as a contributing source of the high levels of fecal coliform bacteria in the harbor. In the past, a sewage pump-out was located at the Menchville Marina. This station was attached to a septic system which is no longer available, but the other marinas in the Harbor were granted variances from pump station requirements by the VWCB based on availability of a pump station at Menchville.

The concentrations of lead and mercury found in Deep Creek sediments are largely from non-point sources, including inflow from the James River during flood tide. Activities associated with harbor operations and stormwater runoff are two potential sources of contaminants, according to the Malcolm Pirnie analyses.

The Malcolm Pirnie report indicated that the organosulfur compound is probably natural in origin while the carboxylic acids present in the sediments largely reflect inputs from faulty septic systems and restaurants. Landfill leachate and wastewater effluent may also be a source of these compounds.

Marine operations in Deep Creek Harbor are probably the main contributors to the high levels of oil and grease within water and sediment samples from the Harbor. Stormwater runoff from streets and parking lots in the watershed may also contribute to the problem.

HISTORICAL RESOURCES

AREA HISTORY

The lands including present-day Deep Creek and Menchville, were settled by the English shortly after the establishment of Jamestown, just 15 miles to the northwest. This area and its river were named for Robert Rich, Earl of Warwick and a prominent member of the Virginia Company. By 1634, when the Warwick River Shire (later Warwick County) was created, the area from Mulberry Island, west of Deep Creek, to Blount Point on the southeast, had become a center of activity. Some of the most influential men of the Virginia Colony were involved here, including Captain Samuel Matthews, who was a member of the House of Burgesses and whose son served as Governor.

In 1626, Captain Matthews acquired a large area of land, which included the planning area. Matthews Manor, as he originally called his home, was renamed Denbigh in 1629 and became the best known of the Warwick Plantations. Denbigh was a small, self-sufficient village surrounded by fields of flax, hemp, barley and wheat. The plantation raised livestock, produced leather, shoes, and cloth, and operated a mill on upper Deep Creek near the site of the existing Young's Mill. Denbigh was acquired from Samuel Matthews' son by the Digges family, and by 1813 title to the plantation had passed to Richard Young.

Deep Creek was valued from the start of the colonial period for the safe anchorage it provided for skiffs, shallops, and small sloops. The Warwick River at Denbigh Plantation provided a port for the county, with a wharf, a

boat yard for repair of vessels and shipbuilding. Here, ship captains stopped to take on tobacco cargoes, food and fresh water before departing the James River.

The productive waters and oyster rocks of the James River provided abundant seafood for the 17th-century inhabitants of the area. The watermen who tonged there used Deep Creek Harbor to moor their crafts during colonial times just as they do today.

Fifty acres "in Warwick County at the mouth of Deep Creek on Mr. Matthews' land," were chosen in 1680 for the creation of a town to serve as the Warwick County seat. Here, at "Town Point," often called Warwicktown, lots were laid out, and a courthouse, jail and tobacco warehouse were erected. Richard Young maintained a tavern here until the town's abandonment. The bluff on which Warwicktown was constructed is the current location of the City Farm detention facility. The town existed until 1809, when the county seat was moved to the present site of the old Warwick Clerk's Office on Stoney Run and Old Courthouse Way.

During the Revolutionary War, Warwick County sustained several British raids. In May, 1781, Warwicktown was the scene of a battle between a British patrol under Lt. Colonel Tarleton and about 400 American militia. Tarleton was headed for the Warwick County Courthouse on orders from General Cornwallis when his troops surprised the colonials, who were reportedly routed "with great loss to the Americans and a trifling detriment to the British."

During the Civil War, Deep Creek served as the southern extension of General Magruder's first line of defenses which extended from Young's Mill across the Peninsula to the Poquoson River. Confederate fortifications at Young's Mill were the first encountered by the Federal forces of Major General McClellan on his march toward Richmond during the spring of 1862.

By the 1790s Warwick County's soils had been depleted by heavy tobacco farming and the agriculture-based population began to decline. By the close of the Civil War the Planning Area was sparsely populated back country and the total county population was only about 1,700.

In the 1860s, after the Civil War, Hudson Mench arrived from Pennyslvania with his family. They settled on the north side of Deep Creek at the location of the present Menchville Marina. The Mench family acquired a large land area extending from Deep Creek northwest to Lucas Creek and between the Warwick River and Warwick Boulevard. Hudson Mench was a lumber manufacturer. He also established a retail grocery store adjacent to his home on the Harbor.

Mench's store supplied a wide variety of merchandise to the watermen and families of the area. It was a true general store stocked with dry goods, drugs, oil, grease, hardware, clothing and soft goods, as well as groceries.

Menchville, as it then became known, served as the port and supply center for this area from which lumber, turpentine, fruit, oysters and other seafood were shipped and supplies and stock for the store were received.

Up to the 1880s oysters and other seafood were taken from Deep Creek Harbor exclusively by "buy boats" which would ship the seafood primarily to northern U. S. markets. Although very much in demand, oysters were not widely

available at any distance from the coast until the development of canning and refrigeration in the mid-19th century.

The opening of the Chesapeake and Ohio Railroad through the Peninsula in 1881 brought about an "oyster boom" at Deep Creek and Menchville. Hundreds of boats brought the James River harvest to the Harbor. Several seafood-related facilities were established at Deep Creek and Menchville during the 1880s and 90s to serve the fleets. They bought and sold the huge quantities of seafood brought in daily and also sold supplies to the watermen. Both Deep Creek and Menchville became flourishing little fishing communities during this time.

The oysters and other seafood were carried in barrels by horse-drawn wagons overland to the "Oyster Point" as it became known, where a small wooden freight station was installed. From here they were shipped by rail for processing and on to major U. S. and foreign markets.

The oyster boom greatly increased activity at Menchville and business for the Menchville store. About this time, a post office was opened in the store which remained in service until about 1950. Hudson Mench served as postmaster until his death in 1918, when his son, William S. Mench, succeeded him. Operation of the Menchville store and post office continued in the Mench family until the 1950s. The Menchville store was well over 100 years old when it was torn down in 1986.

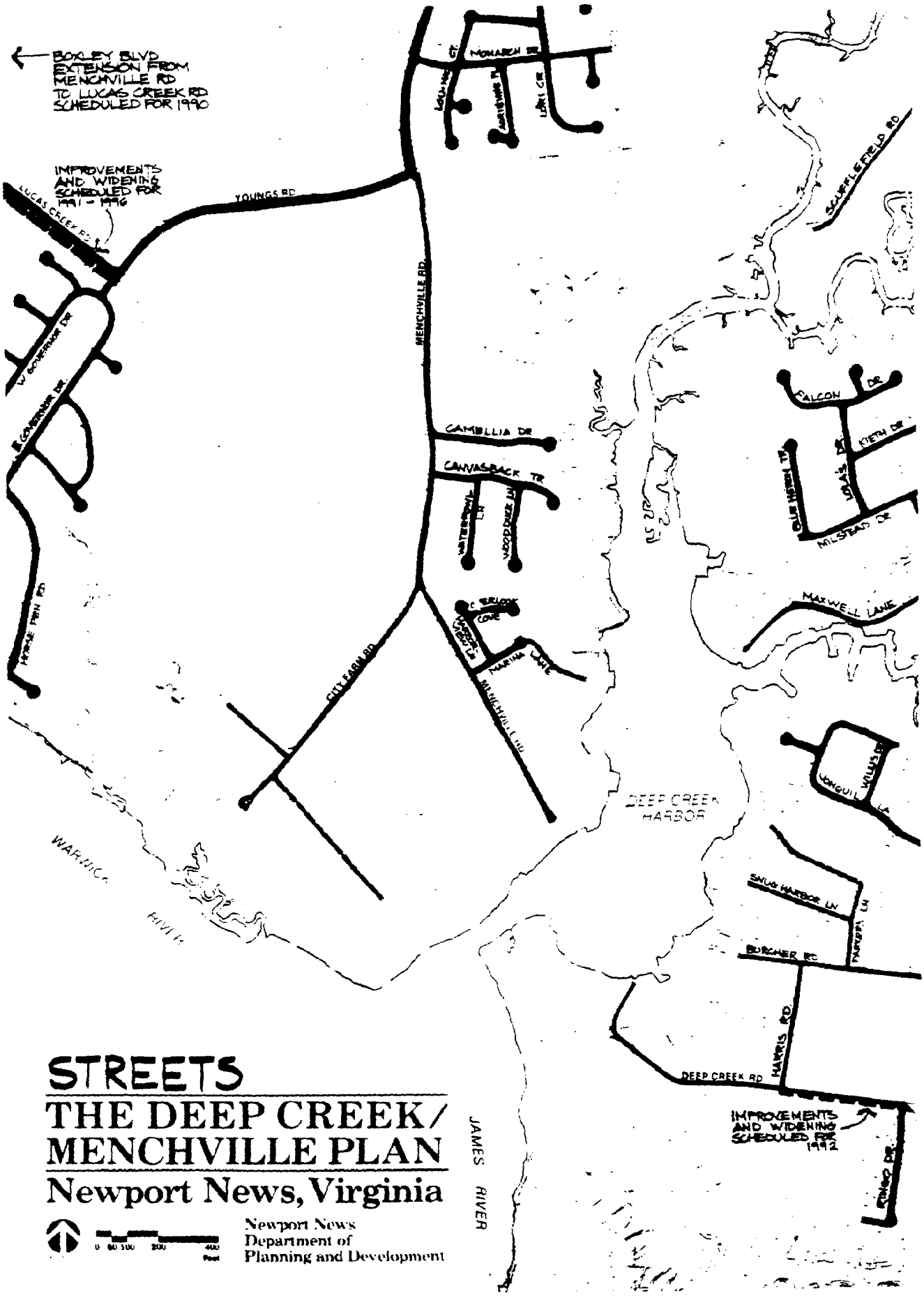
In March 1897, Daniel Shenk of Ohio established a 1,200-acre Mennonite colony in Warwick County on lands adjacent to Menchville. Menchville served as a shipping and supply center for the colony.

In 1916, Warwick County purchased a large area of land from the Mench, Young and Yoder families for use as a prison farm. The existing barracks for the farm's inmates was constructed in 1917 on the former site of Warwicktown.

EXISTING HISTORICAL RESOURCES

The most significant structural landmarks of the area's history are no longer existing. Major historic structures at Menchville and Deep Creek, including two general stores, were demolished relatively recently. The Menchville store was demolished in 1986. Although few tangible structures remain, the area retains its overall historic character and feel. This is due, in part, to the lack of serious modern intrusions and the enduring physical characteristics of the natural landscape and Harbor. However, the historical character of Deep Creek and Menchville is retained primarily by the ongoing way of life and activities associated with the seafood harvesting industry which has made such an impression on this area. The watermen, their tools, and boats have used this area with very little change for more than three centuries.

There are two documented historic resources in proximity to the planning area: the Matthews Manor archaeological site at the adjacent Denbigh Plantation subdivision and the First Denbigh Parish archaeological site. Both of these sites are listed on the Virginia Landmarks Register and the National Register of Historic Places. Colonial Williamsburg Archaeologist Ivor Noel Hume called the Matthews Manor Complex "one of the most important of its period yet excavated in America."



STREETS

THE DEEP CREEK/ MENCHVILLE PLAN

Newport News, Virginia

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Other historically significant structures and sites exist in the Deep Creek/Menchville area. Some of these may be eligible for the Virginia Landmarks Register and/or the National Register of Historic Places. The City Farm barn, built in the early 1930s is probably eligible for these honors. The Warwicktown site on the City Farm should be carefully evaluated for the valuable archaeological resources it may yield. A complete inventory of the historic resources of the area would determine potentially eligible sites.

STREETS

MENCHVILLE

Existing street access into the Deep Creek/Menchville area is limited. Menchville Road provides the only access through the Menchville peninsula to Deep Creek Harbor. South of Youngs Road it consists of a narrow two-lane section and is lined by open ditches. Following the historic road alignment to Menchville, it remains a narrow "country road" and does not meet current street standards.

Its current traffic load is generated by two recent residential subdivisions, the City Farm, the James River Treatment Plant, Menchville and Harborview Marinas and several established residences. Menchville Road must also accommodate a 75 unit condominium project approved in 1988, but yet to be constructed. In addition to residential traffic, Menchville Road carries commercial, institutional, and industrial traffic from the marinas, City Farm, and wastewater treatment plant. Access from Menchville Road to the City Farm and James River Treatment Plant is provided by City Farm Road, also a narrow two-lane street. No street improvements are currently planned south of Youngs Road.

Above Youngs Road, Menchville Road has been improved to collector standards, with four lanes and curb/gutter. Youngs Road, also an improved road, connects Menchville Road to Lucas Creek Road which terminates at the western boundary of the City Farm. Lucas Creek Road provides access to the highly populated northwest portion of Newport News, including Denbigh.

Currently a two-lane Road, Lucas Creek is planned for improvement to 4 lanes. Right-of-way has been reserved for this widening. Several phases of improvements scheduled for fiscal Years 1991-1996, and costing $14.2 million, will carry Lucas Creek Road through to Warwick Boulevard, Snidow Road and Fort Eustis Boulevard.

Another planned improvement that will affect Menchville is the extension of Boxley Boulevard from Menchville Road to Lucas Creek Road. This connection will relieve traffic in upper Menchville by providing a more direct route for Lucas Creek Road traffic south- and east-bound for the Oyster Point area, Interstate 64 and the eastern peninsula. This traffic must currently travel via Youngs Road and Menchville Road to Boxley Boulevard. Also, the planned Bland Boulevard extension to Eastwood Drive at Warwick Boulevard will provide direct access from Lucas Creek Road to Patrick Henry International Airport. This will improve access from Menchville, including the marina area, to the Airport significantly.

Menchville will be afforded convenient access to and from Interstate 64 by the Oyster Point Road interchange currently under construction and scheduled for completion in 1990. The $18.1 million Oyster Point Road improvements and interchange will provide Menchville with a direct connection to the regional and national highway network.

DEEP CREEK

Deep Creek Road serves as the only access for the lower Deep Creek Harbor area. This road terminates abruptly at the Deep Creek pier and traffic must use the private parking lot of Herman's Restaurant to turn around.

The City's Capital Improvements Program plans $2,275,000 of improvements to Deep Creek Road between Warwick Boulevard and Harris Road for fiscal year 1992. This includes widening of the road to three or four lanes. No improvements are planned for the remaining one-half mile of Deep Creek Road, although this section must accommodate the daily traffic of the watermen using the pier, and that of the restaurant and James River Marina.

Maxwell Lane serves the upper portion of the Harbor terminating at the Warwick Yacht Club. It carries approximately 4,200 average daily trips.

UTILITIES

WATER

The entire Deep Creek/Menchville area is currently served by City water. Most of the area is served adequately. However, Menchville below City Farm Road is currently served by only a 2" main. This line must serve the entire area's residential and marina uses. Although improvements are scheduled to begin soon, water capacity and pressure in lower Menchville is seriously inadequate. Construction of an 8" replacement line will take place during 1989. This will provide adequate capacity for existing and future uses, but fire flows will remain below standards due to the dead-end nature of this line.

SANITARY SEWER

Menchville A force main, 8" gravity lines and pump station number 120 serve the Menchville subdivisions of Lawndale Farms, Waterview and Harborview Estates. The homes below City Farm Road and the Menchville Marina area are currently on septic systems, while the Menchville Marina and store share a septic system. A former boat sewage pump-out is no longer used at the marina because of the inadequacy of the septic drainfield. The City Farm is on a small pump station which feeds directly to the wastewater treatment plant. A larger pump station would be required for any expansion of City Farm facilities or any significant residential or other development in the existing City Farm area.

Pump Station Number 33 and force main is needed to serve existing residences and the Marina area on lower Menchville Road. There are currently no plans for these improvements, but they would be required by any new development in this area.

Deep Creek Most of Deep Creek is currently on septic systems, although recent sewer line installations and a major project now under construction on Deep Creek Road are making City sewer accessible to much of this area. Serious health and other problems have been associated with the Deep Creek septic situation, including outbreaks of raw sewage above ground and sewage leaching

into the water of Deep Creek and its tributaries. During 1988, upon investigation by the Virginia Department of Public Health, the City Public Works Department provided relief for numerous private residents and Herman's Restaurant in the form of septic cleaning and pumping and fill dirt on drain fields.

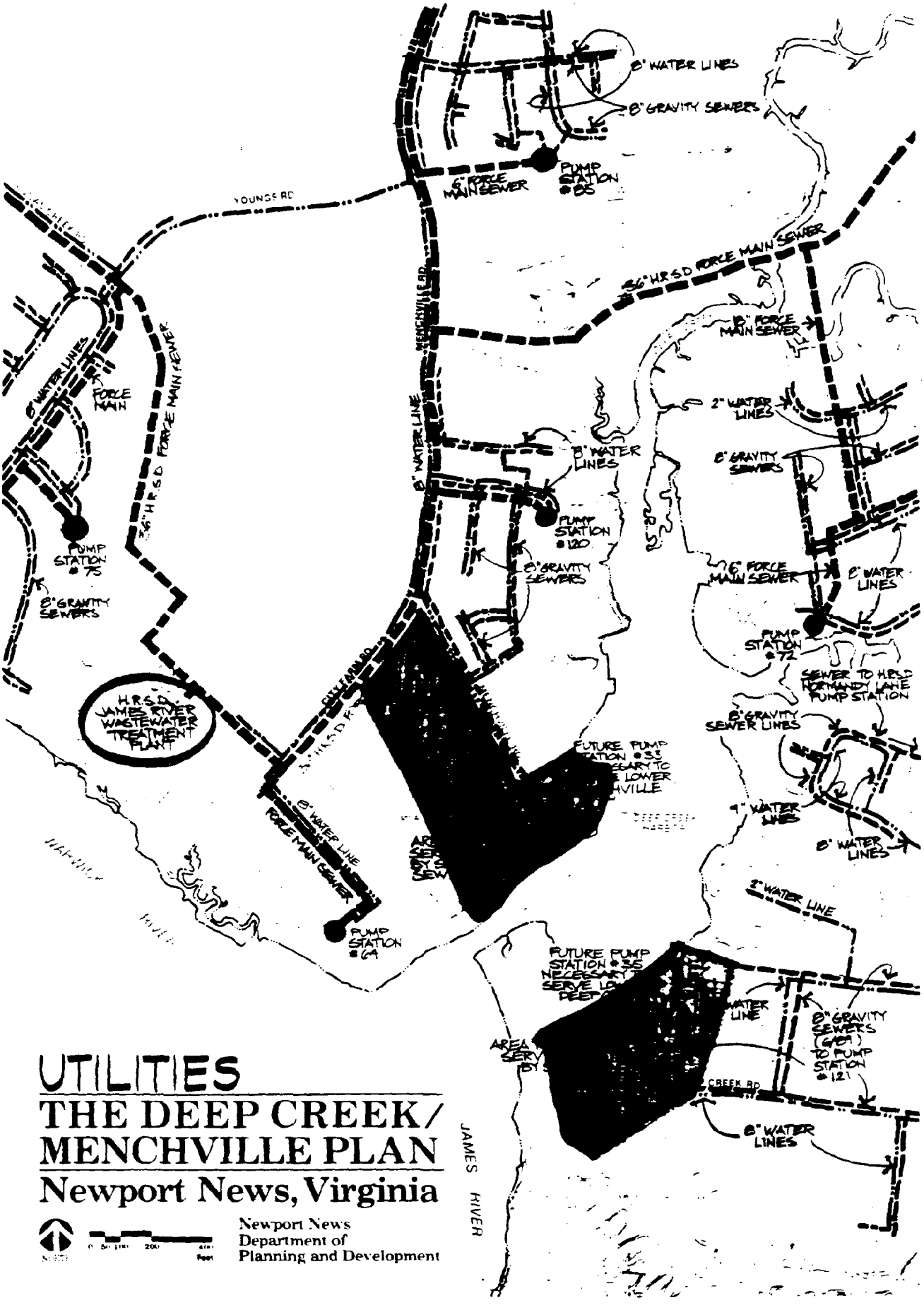
With improvements currently underway, the majority of Deep Creek will be served by its three pump stations. Pump station number 72 currently serves the area immediately above Maxwell Lane in the planning area, including Blue Heron Trail, Lolas Drive, the Falcon Drive area, and Warwick Yacht Club. The Jonquil Drive area is served by an 8" gravity main completed in 1988 to the HRSD Normandy Lane pump station. Phase one of the Burcher/Barclay Sewer Extension project, scheduled for completion in June 1989, will make City sewer available to much of the Burcher, Harris, and Deep Creek Road area through connection by 8" gravity lines to Pump Station 121. Eighty percent of structures currently on septic will have sewer available after completion of several phases of sanitary sewer installation between 1989 and 1993. However, lengthy additional connections to this system will be necessary in order to serve many of the homes in the area particularly those near the shore of Deep Creek and in the Snug Harbor Lane/Prospect Drive area. In addition, many of the residents now with conveniently available sewer have not yet been connected.

Sewer connection is not mandatory in Newport News. Although the City provides service laterals to each property, hook-up is the responsibility of the property owner. A $250 discount from the cost of the City's sewer connection permit fee for the first year following availability of sewer provides an existing incentive for early connection.

Sanitary sewer service for the lower Deep Creek area, including Herman's Restaurant, the James River Marina service area, and the public pier cannot be included in any existing service area and will require installation of pump station #35.

STORM SEWER

There are no significant storm sewer improvements serving the area. With the exception of the recent subdivisions, stormwater runoff in both Deep Creek and Menchville is handled by open ditches. The storm sewers of the subdivisions as well as the open ditches drain directly into the Deep Creek with no detention ponding or other storm system improvements.



UTILITIES
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PLAN COMPONENTS AND PROGRAM

There are several component uses which make up the program for Deep Creek/Menchville. These are Park/Recreation, Seafood, Commercial/Industrial, Residential, Natural Areas/Environment, City Farm, Wastewater Treatment Plant, Dredge Deposit, Landfill and Streets/Utilities. Examination of their background, characteristics, functional requirements, and opportunities and constraints affecting them is necessary to integrate these components into an effective plan.

PARK/RECREATION

Additional park and recreation facilities to serve the City's growing population has been frequently voiced as a critical need if Newport News is to retain and enhance its attractive quality of life. Also, for a marine-oriented community, Newport News has relatively little public waterfront land.

The City of Newport News contains 16 parks totaling 8,666.8 acres. All but 336.8 acres of this park land is contained in Newport News Park at the extreme northern end of the City. The northwest quadrant of Newport News (Planning District Three), in which Menchville is located, contains only two parks, Denbigh Boulevard Park and Nicewood Park. These parks total approximately 20 acres. This represents less than one percent of the area's acreage.

The population of Planning District Three was estimated at approximately 41,000 in 1988, excluding Fort Eustis. Ten acres of park land per thousand residents is the accepted minimum national standard used for park planning. Given the area's population, over 400 acres of park land are necessary in Planning District Three to meet this standard. Newport News Park is a valuable regional park in proximity to the northern end of District Three. However, Newport News Park is not readily accessible to the District's population without crossing major arterial and interstate highways and rail lines. Significant additional park land within the District is a critical need.

Huntington Park, Leeward Marina, and the Hilton Pier, all in the southern sector of Newport News, provide the only recreational access to the James River in the City. Mariner's Museum Park and Christopher Newport Park, also in the southern sector, are the only other parks in the City which overlook the James. Three parks overlook Hampton Roads at the extreme southern end of Newport News. Denbigh Boulevard Park, on the narrow portion of the Warwick River, provides the only riverfront park access in northern Newport News. These parks total less than one and three-fourths miles of frontage along the Warwick and James River and Hampton Roads, while the total frontage along these bodies of water within the City is approximately 42 miles.

The need for significant additional park land and riverfront access was documented in the Northern Sector Recreation Study, conducted by park planning consultants in 1979. A key component proposed in that study was a major park which would cover the City Farm and landfill land.

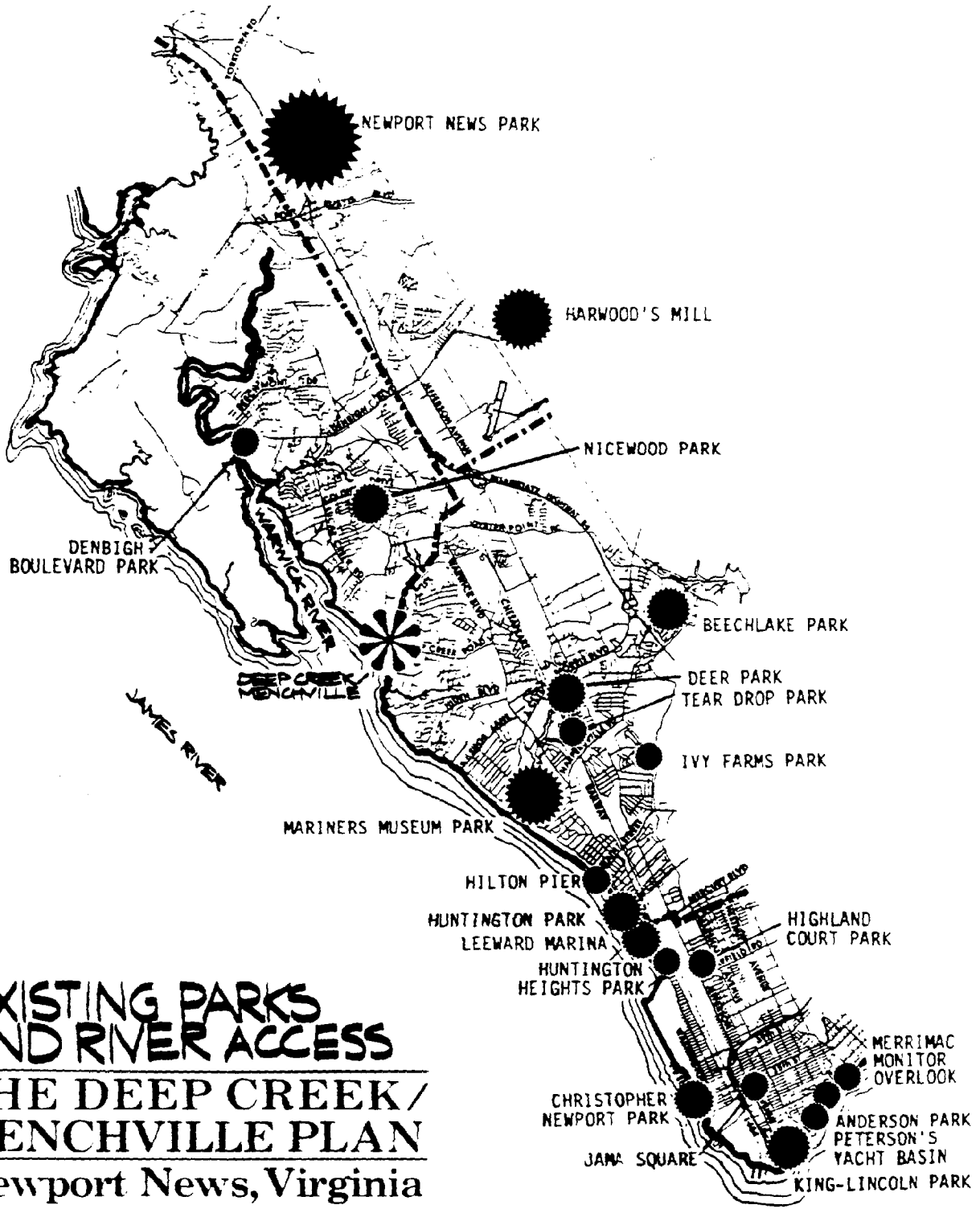
The City Farm land has been identified by the Northern Sector Recreation Study and the 1980 General Plan as among the most inherently valuable, potentially attractive, and strategically located sites in the City for development as a major City park. "If and when the existing detention facility can be relocated, that portion of the site is very well suited for a new riverfront park...," according to the Northern Sector Recreation Study. The extensive study contained a conceptual plan for a "James River Park" of 250-325 acres on the City Farm and landfill site. The plan included a major indoor recreation center, tennis center, baseball and softball complex, marina, boat ramp, fishing pier, picnic areas, children's farm zoo, outdoor amphitheater, and other facilities.

Although the layout would require alteration from the recreation study due to the needs of other program elements, many of the same and/or other facilities could be included in such a park.

SEAFOOD COMMERCIAL/INDUSTRIAL

Deep Creek Harbor is one of the most important resources to the Virginia seafood industry. It is currently the number one oyster landing site in the Commonwealth according to figures supplied by the Virginia Marine Resources Commission (VMRC). Deep Creek Harbor is the primary port of landing, off-loading, and distribution in support of the James River seafood harvesting interests, with a particular emphasis on shellfish.

The James River oyster beds have historically been known as the most productive in the world. In recent years, more than half of all Virginia oysters have come from the James River. In 1988, 65 percent of the



EXISTING PARKS AND RIVER ACCESS

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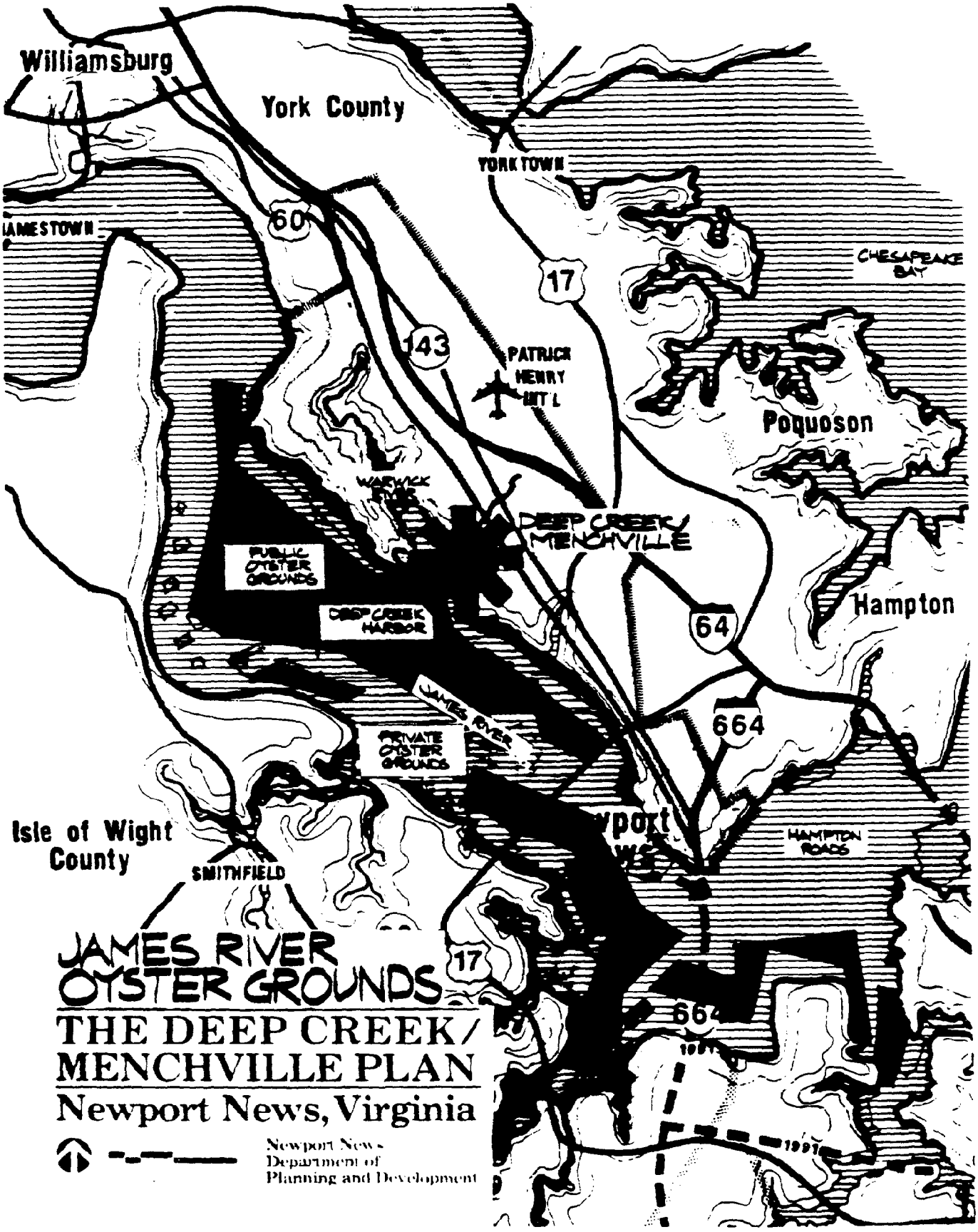
Williamsburg
York County
YORKTOWN
JAMESTOWN
60
17
143
CHESAPEAKE BAY
PATRICK HENRY INT'L
Poquoson
WARWICK RIVER
DEEP CREEK/ MENCHVILLE
PUBLIC OYSTER GROUNDS
DEEP CREEK HARBOR
64
Hampton
JAMES RIVER
664
PRIVATE OYSTER GROUNDS
Isle of Wight County
SMITHFIELD
HAMPTON ROAD
17
664
1991
JAMES RIVER OYSTER GROUNDS
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Newport News Department of Planning and Development

Commonwealth's total were harvested from the James. James River landings for market and seed oysters in relation to landings in other Virginia waters are shown in Tables 8 and 9. The overall importance of the James River as a source of oysters has risen in recent years because it has been relatively unaffected by disease which has seriously impacted the oyster population in other Virginia waters. The James River oyster beds are also critical to the productivity of those of the entire Chesapeake Bay. Over the past 50 years more than 75 percent of Virginia's seed oysters have been harvested in the James. The value of oysters harvested from the James River has averaged more than $5.4 million annually for the past three years for market and seed oysters combined.

Deep Creek Harbor is critical to the harvest of these productive oyster beds, according to the VMRC. As shown on the "James River Oyster Grounds" map, Deep Creek Harbor offers a central location with respect to the state-leased and private oyster grounds in the James River, as well as the only oyster distribution facilities in the City of Newport News. An average of two thousand bushels of oysters are shipped daily from this point by truck for eight months out of the year. According to the VMRC, 316,000 bushels of market and seed oysters were landed at Deep Creek during the 1986/87 season at a value in excess of $3.6 million, making the Harbor the top oyster landing site in Virginia. More than 40 percent of Virginia's total market oysters, and 63 percent of its seed oysters were landed here in 1988. These oysters were valued at over $3 million. Deep Creek landings for market and seed oysters in 1988 are shown in Table 7.

Table 7 1988 Oyster Landings in Deep Creek Harbor

1988	Bushels	Value	Percent of James River Total	Percent of Virginia Total
Market Oysters	157,456	$2,815,313	62.0%	40.2%
Seed Oysters	93,920	315,571	85.6%	63.0%

Table 8 Virginia Market Oyster Landings by Source

	Annual Average - 1986 - 1988		
Source	Bushels	Value	Percent
James/Nansemond	317,011	$4,912,572	52.8%
York/Poquoson/Back	20,354	274,062	2.6
Mobjack & Tribs.	4,956	69,988	0.7
Piankatank/Milford	206	2,588	0.0
Rappahannock/Corrotoman	137,710	1,958,764	19.7
Little/Great Wicomico	6,076	76,998	0.7
Potomac Tribs.	98,431	1,448,200	15.2
Seaside Eastern Shore	33,733	531,763	6.0
Bayside Eastern Shore	16,803	216,785	2.1
Chesapeake Bay	1,677	21,797	0.2
VIRGINIA TOTALS	636,957	$9,513,517	100.0%

Table 9 Virginia Seed Oyster Landings by Source

Source	Annual Average - 1986 - 1988 Bushels	Value	Percent
James/Nansemond	176,719	$520,161	77.1%
York/Poquoson/Back	-	-	-
Mobjack & Tribs.	1,921	6,482	1.2
Piankatank/Milford	-	-	-
Rappahannock/Corrotoman	6,096	17,108	2.3
Little/Great Wicomico	-	-	-
Potomac Tribs.	6,785	19,145	2.5
Seaside Eastern Shore	33,384	102,668	16.2
Bayside Eastern Shore	2,043	4,964	0.7
Chesapeake Bay	-	-	-
VIRGINIA TOTALS	226,948	$670,526	100.0%

The James River is also a prime blue crab spawning and wintering location. Forty to 50 crabbers use Deep Creek to dock and to off load their harvest. Clams are, in large part, handled at the Seafood Industrial Park 15 miles south of Deep Creek, but do represent a small part of the incoming product at Deep Creek. Finfish, although severely cut back in the last 10 years due to water contamination and ensuing conservation measures, still represent a solid market in the James River commercial seafood industry. Gillnets and line and reels are still pulling in quantities of shad and grey trout in their respective seasons.

Historically, more than 500 boats took harbor at Deep Creek. Depending upon the time of year, there are often as many as 200 or more workboats using the harbor currently. Most of them lease slips at one of the marinas in Deep Creek or dock at the public pier.

The number of boats utilizing the Harbor has nearly doubled over the past three years. This is mainly because the James River has remained largely unaffected by the recent blight which has rendered so many of the region's oyster beds unproductive. Also, pressure for residential development of coastal areas in other parts of Tidewater Virginia has displaced many watermen, causing them to seek their living working the James.

Although use of the Harbor has greatly increased, waterfront access to the harbor for landing and off-loading of catch remains severely limited. Increased utilization and limited parking at the Deep Creek pier on the south side of the Harbor have caused congestion. In 1986, application was made by the owner of the Menchville Marina to rezone that waterfront land primarily to condominium use. Although that application was unsuccessful, pressure remains for conversion of valuable seafood industry land to residential use.

The City maintains its largest pier for public use on the southside of Deep Creek Harbor. The Deep Creek pier was donated to the City of Warwick expressly for the use of Deep Creek watermen. It is open to the public and used almost exclusively for docking of commercial fishing boats. The pier is also used for unloading and brokering of oysters and other seafood. The pier covers 0.13 acres of subaqueous land at the termination of Deep Creek Road. It has no associated dry land other than the road right-of-way.

The City owns a small, but strategically located parcel of 0.22 acres on the harborfront at Menchville. This property was donated to the City of Warwick in 1955 subject to the conditions that it be set aside for public use, that no buildings be placed thereon, and that if it is not used by the City for a period of one year it will revert to the grantors. This land is currently used for docking of commercial fishing boats, loading of oysters and other seafood and parking for watermen. This property provides the only public access to Deep Creek Harbor at Menchville.

The basic needs of the seafood industry include places to off-load and market the day's catch and berthing facilities for safe overnight storage of boats. To adequately function, facilities are needed for distribution of the seafood, including packing and truck loading. Support facilities including parking, and restrooms for the benefit of the watermen are also important. Marine service operations for repair and maintenance of boats are a critical need for the industry. Fueling stations, boat lifts and sewage pump stations are among the necessary facilities of the service operations. Currently two marine service operations are located on Deep Creek Harbor; Harborview Marina (formerly Keffer Marine) and James River Marina. Harborview Marina has the only boat lift on the lower James. There is a need for additional service facilities, including facilities for owner maintenance and repair of boats/equipment. These support and service facilities insure the dollars earned by harvesting oysters will remain in the City of Newport News.

A market for the harvester's product is perhaps the most critical need. Currently up to five buyers operate in Deep Creek Harbor; three at Menchville, one at Deep Creek pier, and one "buy boat" in the harbor. However, the market can be very inconsistent, and at times there is no market. A seafood market center that would be open to the public as well as wholesale buyers has been supported as an idea to increase market opportunities and maximize the economic potential of the Deep Creek Seafood market here. Restaurants and other facilities to make the harbor attractive to patronage by the public would also be worthwhile in concert with the public seafood market.

RESIDENTIAL

Deep Creek and Menchville contain several established residential neighborhoods. While some residences date back to the early 1900's, the majority have been constructed since 1950, and the two subdivisions making up most of the residential uses in Menchville have been developed during the past three years. A rezoning in 1988 created the only multi-family land in the area. An unsuccessful rezoning request for the Menchville Marina property was made in 1986. There is considerable pressure for additional residential development in Deep Creek/Menchville, and very little vacant residential land remains.

Protection of the existing residential neighborhoods and seafood industry uses from new and existing uses in the area, and protection of the area's historic resources and character are important considerations in the formulation of this plan.

NATURAL AREAS/ENVIRONMENT

The Deep Creek/Menchville area contains over 50 acres of wetlands and a significant amount of forested land. A large percentage of these are publicly owned. In addition to their scenic beauty, these areas serve as valuable

wildlife habitats. Wetlands serve as productive estuaries for the aquatic food chain. These environmental resources are discussed in more detail in the Environmental Analysis prepared for the Deep Creek/Menchville area during this planning effort. Protection of these natural areas is important to the environmental health and scenic quality of Deep Creek/Menchville.

NATURAL AREAS

Wetlands and some other significant lands should be preserved within the land use designations of the area and protected from development. The publicly owned natural areas should be made part of the park system and should contain trails, access and interpretation in a manner consistent with their preservation. Walkways through these natural areas will provide for their enjoyment by the public, which will help build awareness, appreciation and support for preservation of such areas.

Owners of privately-held natural areas should be encouraged to protect and manage these areas as well. Existing development controls, and those proposed by the Chesapeake Bay Preservation Act, should also be used as minimum requirements to preserve and manage both public and private natural areas.

CHESAPEAKE BAY PRESERVATION ACT

During 1988, the General Assembly of Virginia approved House Bill 925 which created the Chesapeake Bay Preservation Act. This act will require localities to identify and designate Chesapeake Bay Preservation Areas and establish criteria for development in these areas between July 1, 1989 and June 30, 1990.

The Chesapeake Bay Local Assistance Board was established by the Act to carry out its provisions. The Board is currently finalizing procedures and criteria for the designation and regulation of preservation areas by local governments. These regulations should provide significant tools for the protection of the Deep Creek/Menchville environment.

As they are proposed at this time, the Chesapeake Bay Preservation Areas will encompass "Resource Protection Areas" and "Resource Management Areas."

The components of the Resource Protection Areas which are located in the planning area are tidal wetlands, non-tidal wetlands, tidal shorelines and a vegetated buffer. The non-tidal wetlands included are those hydrologically connected and contiguous to tidal wetlands and to tributary streams. The vegetated buffer zone is located adjacent to, and on the landward side, of any other Resource Protection area and along both sides of any tributary stream.

The components of potential Resource Management Areas within the planning area are steep slopes, highly erodible soils and floodplains.

Certain types of development and redevelopment will be allowed within Resource Protection Areas and Resource Management Areas based on land use and development criteria contained in the Proposed Chesapeake Bay Preservation Area Designation and Management Regulations dated April 5, 1989.

Resource Protection Areas Under the current criteria, the "Group I" and "Group II" tidal wetlands in the planning area would be included in a Resource Protection area. These are defined by their dominant vegetation.

Tidal shoreline is defined in the proposed Chesapeake Bay Preservation Area Designation and Management Regulations as land contiguous to a tidal body of water to an elevation one and one-half times the local tide range above mean low water level. Shoreline features are a composite of steep slopes, highly erodible soils, highly permeable soils, aquatic and non-aquatic vegetation, floodplains and critical habitat areas.

The Chesapeake Bay Preservation Area Designation and Management Regulations also define a "buffer zone." The purpose of the buffer zone is to provide for the removal or reduction of sediments, nutrients, and potentially harmful or toxic substances in runoff entering the Bay and its tributaries; minimize the adverse effects of human activities on wetlands, shorelines, state waters, aquatic resources and habitat dependent on water quality; and maintain the natural environment of streams. The width of the buffer zone will be 100 feet landward of all other components of Resource Protection Areas contiguous to tidal waters, or 50 feet landward of all other components of Resource Protection areas contiguous to non-tidal waters.

The buffer zone will be preserved in its natural state. However, an approved water-dependent use or development may remove vegetation from the buffer zone based on specific land development performance criteria.

The Chesapeake Bay Preservation Area Proposed Land Use and Development Criteria states that land development and redevelopment proposed within Resource Protection areas may be allowed only if it is water dependent or constitutes redevelopment. A water dependent facility includes: ports; the intake and outfall structures of power plants, water treatment plants, sewage treatment plants, and storm sewers; marinas and other boat docking structures; beaches and other public water-oriented recreation areas; and fisheries or other marine resources facilities. A new expanded water dependent facility may be allowed provided that: (1) it does not conflict with the comprehensive plan; (2) it complies with the performance criteria set forth in the proposed land use and development criteria; (3) any non-water-dependent component is located outside of the Resource Protection Areas; (4) marina and community boat mooring locations conform to criteria established by the Virginia Marine Resources Commission; (5) access will be provided with the minimum disturbance necessary. Where possible, a single point of access will be provided.

Redevelopment shall result in a 10% reduction of non-point source pollution in runoff compared to the existing runoff load from the site.

CITY FARM

The Newport News City Farm has occupied its original site on the Warwick River since its establishment in 1917. At that time the site was located in rural Warwick County and further isolated at the tip of the Menchville Peninsula. The Prison Farm originally contained over 500 acres, but over the years tracts were converted to waste water treatment plant, sanitary landfill, and school use, leaving the present site of approximately 350 acres.

The City Farm is an important correctional facility serving Newport News and the entire Peninsula. It is a minimum security correctional institution which currently houses 160 to 170 inmates. Most of the inmates are model young adult or first offenders of the State penal system who have earned the opportunity to serve their time here. The facility has been operating at capacity for years. A facility housing up to 250 is needed.

The existing prison building on the waterfront was built in the 1920s and remodeled in the 30s. According to City Farm officials, the building is outdated and not suited to the Farm's current correctional needs. It is of high security construction with individual cells and therefore can only house 30 inmates. More efficient dormitory-style housing would be more appropriate. Currently, many inmates are located in a temporary building. Other City Farm facilities include a new dining room/kitchen and an historic barn built by inmates in the 1930s.

Although the City Farm has been phasing out its agricultural activities, it still farms about 100 acres of corn on site and 200 acres near Patrick Henry Airport. Livestock currently at the Farm includes 75 head of beef cattle and 30 hogs. Agriculture is currently a break-even operation for the farm, primarily providing food for the inmates.

City Farm inmates perform a variety of jobs for the City, including mowing and maintaining public right-of-ways, demolishing condemned structures, repair work within the prison facility, and construction-related jobs. The value of this work to the City was calculated at $600,000 in 1987.

The City Farm has been a subject of previous land use planning efforts. The adopted 1980 General Plan/Land Use Plan called for its relocation and suggested a site adjacent to the Vocational Education Center on Ft. Eustis Boulevard. The Land Use Plan update in 1985 reflected the views of the previous plan calling for the Farm to be relocated elsewhere and for the current site to be evaluated for appropriate use, predominantly as a waterfront park.

In 1987, after extensive study, a City Farm Relocation Committee recommended two possible sites for a relocated prison facility. One of these was in a new location in York County. The other site is the western portion of the existing City Farm north of the Hampton Roads Sanitation District Plant. The recommendation called for 20 to 30 acres to contain a state-of-the-art correctional facility, including a detention center of 120,000 square feet, an administration building of 4,800 square feet, and a road service and farming/construction vehicle and equipment storage complex of 18,000 square feet.

WASTEWATER TREATMENT PLANT

The James River Waste Water Treatment Plant, operated by the Hampton Roads Sanitation District, is located in the southwest portion of the area. The plant site presently consists of 22 acres. Current treatment capacity of the plant is approximately 20 million gallons/day (MGD). However, HRSD estimates that a capacity of 30 MGD will be required to serve projected population increases in its service area and the possible transfer of Fort Eustis flows to the plant. Also, additional plant facilities are necessary to remove nutrients during the treatment process as called for in statewide water quality improvement programs. In addition, because of its impact on oyster productivity and other seafood of the James River, extraction of chlorine from the Treatment Plant's effluent is critical. Chlorine removal facilities have recently been installed at the Plant. However, the Virginia Water Control Board has not yet amended HRSD's license to include these chlorine removal facilities and, therefore, they are not yet in operation.

In order to meet future expansion needs and to accommodate nutrient removal facilities, the plant will require an additional nine acres of land. New facilities include preliminary treatment, clarifiers, digesters, odor control, and aeration. Approximately four of the nine additional acres are proposed for buffering the site from surrounding uses.

DREDGE DEPOSIT

Due to constant sedimentation, periodic dredging of Deep Creek Harbor and the channel leading from the James River is necessary to keep the Harbor navigable. The U.S. Army Corps of Engineers (USCOE) currently owns a 30-acre easement in the center of the City Farm to be used for future deposition of dredge material from Deep Creek Harbor. The USCOE estimates that 210,000 cubic yards of material will be dredged from Deep Creek Harbor every seven to ten years. At that rate the existing site would last 50 years. The next dredging is scheduled for 1991 or 1992.

The current site is a severe constraint to the utilization of City Farm land as its location is ideal for significantly higher and better uses. The existing spoil site is not best suited to accommodate dredge spoil deposit, but indications are that it will be used unless a suitable alternative site can be acquired.

Standard dredging arrangements leave the responsibility for actual dredge operations to the Army Corps of Engineers, while requiring the benefited jurisdiction to provide and prepare the spoil disposal site. The City was relieved of its requirement to cooperate in Deep Creek Dredging by Act of Congress in 1976. Therefore, USCOE deposited material from the 1976 dredging at the Craney Island disposal site in Hampton Roads. Although the Act was still in effect, the City granted the existing disposal easement to USCOE in 1980. However, the 1976 Act remains in effect and could legally prevent the Corps from using the easement.

Because of the existing easement, the primary responsibility to locate an alternative site rests with the City. A detailed study of Deep Creek dredge disposal alternatives has been completed by Malcolm Pirnie Inc. for the City. Several technically feasible options were identified, including disposal at Craney Island, Marsh creation at Mulberry Island, disposal on the Menchville Landfill, a reusable site on the former disposal area at the mouth of Deep Creek and a reusable site on a portion of the landfill.

LANDFILL

The Menchville sanitary landfill began operating in 1964 and was finally closed in 1985, although it began to be phased out in 1974. The landfill site was previously a low-lying wetland area tributary to Deep Creek. Settling, composting and methane gas production of the landfill is expected to continue for the next 20 to 30 years. Meanwhile, protection of its clay cap to prevent gas escape or water leaching is critical. Potential reuse of the landfill site as part of its reclamation can include active or passive recreational uses and/or a dredge spoil deposit site. Active uses of the landfill are not recommended until substantial completion of the settling and composting process. The landfill is raised some 30 feet above the surrounding elevation. Therefore, care must be taken to protect the adjacent residential neighborhood to the north from the impacts of the landfill or its future uses. An existing berm blocks the view of the landfill from Menchville Road on the west.

MASTER PLAN

The various component uses are integrated into a master plan for the Deep Creek/Menchville Area in a manner which enhances their ability to function, minimizes potential conflicts, and best meets the goals of the community. The layout of these components is shown on the Master Plan map and the approximate acreage allocated to each use is indicated in Table 10.

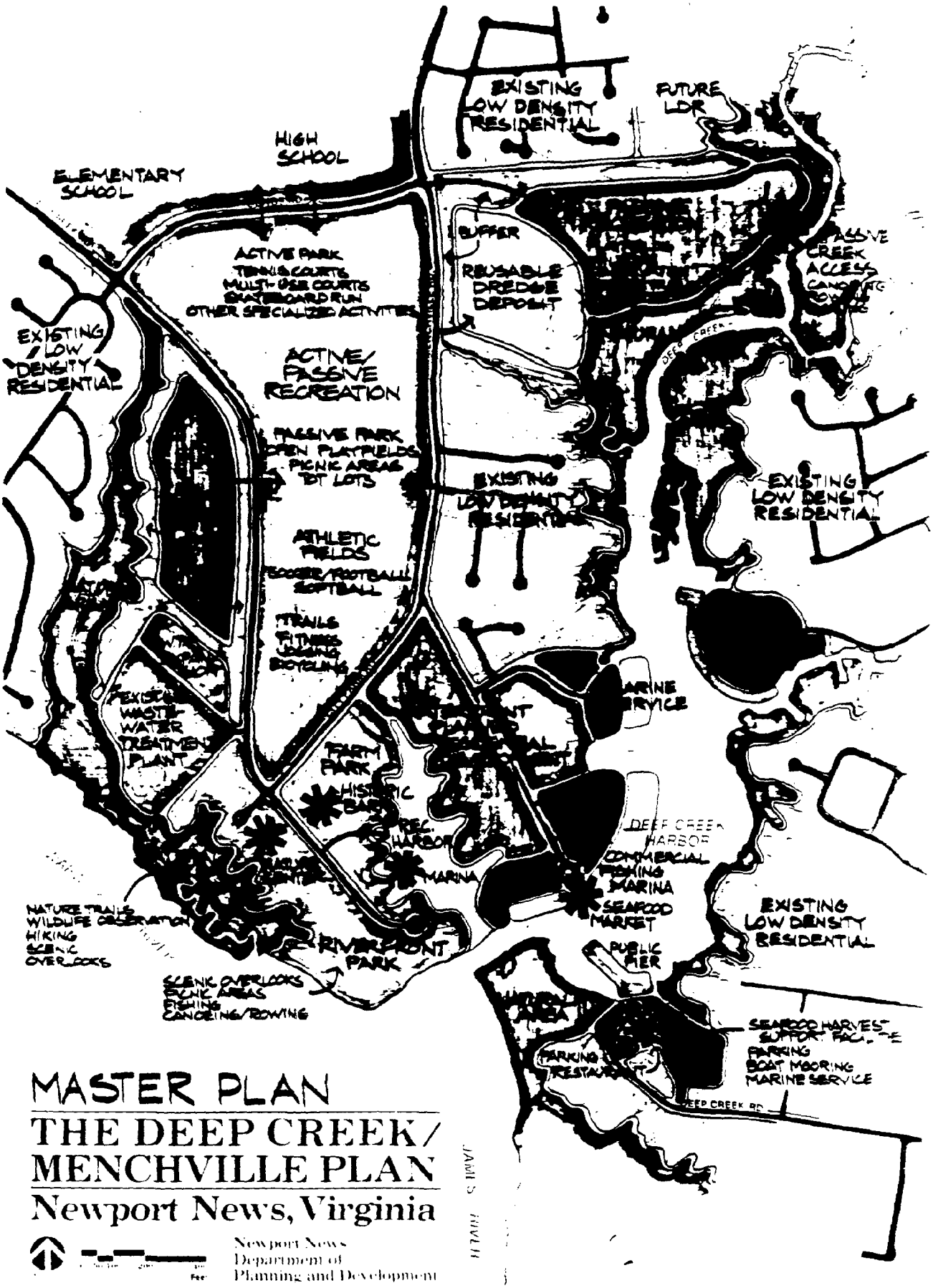
PARK/RECREATION

This is one of the most significant components of the Plan. The majority of the current City Farm land is utilized to create a major community park of some 300 acres consistent with past studies, including the Land Use Plan. The key feature of this park is its location on the shore of the Warwick River at its confluence with the James River. The riverfront park makes nearly two-thirds of a mile of shoreline available for enjoyment by the public.

For active recreation there will be something for all ages and interests, including softball, baseball, basketball, football, soccer, jogging, bicycling, tennis, swimming, shuffleboard and a variety of other facilities. The large flat expanse at the upper portion of the park between Youngs Road and City Farm Road is ideal for these active recreation facilities. This part of Deep Creek/Menchville is the most accessible by vehicular traffic and is located across Youngs Road from Menchville High School and B.C. Charles Elementary. Sensitive design and layout of the park and the buffer area along

Table 10 Master Plan-Use Allocation

Use	Acreage		Percentage	
Park/Recreation		315.5		42.1
Upper Park	275.0		36.7	
RiverFront Park	22.0		2.9	
Farm Park	12.5		1.7	
Recreational Harbor	6.0		0.8	
Private Recreation	8.2	8.2	1.1	1.1
Seafood Commercial/Industrial		18.7		2.5
Menchville	10.0		1.3	
Deep Creek	6.5		0.9	
Harborview	2.2		0.3	
Residential		145.5		19.4
Single-family	138.5		18.5	
Multi-family	7.0		0.9	
Natural Area		88.6		11.8
Public	53.5		7.1	
Private	35.1		4.7	
City Farm		25.0		3.3
Detention/Administration/Storage	15.8		2.1	
Buffer	9.2		1.2	
Wastewater Treatment Plant		22.3		3.0
Treatment plant	16.8		2.3	
Buffer	5.5		0.7	
Landfill Reclamation		47.5		6.3
Passive recreation	27.5		3.7	
Reusable dredge deposit	10.0		1.3	
Buffer	10.0		1.3	
Water		78.5		10.5
Deep Creek Harbor	42.2		5.6	
Creeks and tributaries	27.8		3.8	
Recreational Harbor	8.5		1.1	
T O T A L		749.8		100.0%



MASTER PLAN

THE DEEP CREEK/ MENCHVILLE PLAN

Newport News, Virginia

Newport News
Department of
Planning and Development

and other environmental restoration programs will significantly increase the Harbor's water quality. Modern facilities will improve efficiency and protect the environment, but the historic charm of Deep Creek Harbor is retained and enhanced.

On the southside of the Harbor, the public pier and marina area is maintained and improved. Necessary support facilities, including restrooms, sanitary pump-out, public parking, and a turn-around, at the end of Deep Creek Road are provided through a joint project with private residential and commercial property owners. Improvements at Deep Creek will also include a small park and picnic area amenity overlooking the pier and harbor. Adequate parking at the Deep Creek Pier area will be provided through layout and delineation of efficient parking on existing parking lots, parking improvements along Deep Creek Road, and possibly a parking structure or acquisition of land for surface parking adjacent to the existing seafood commerical land. These improvements create a harbor area which meets the needs of Deep Creek watermen, is advantageous to Deep Creek businesses, projects an inviting image to the public, and respects nearby residents.

The Plan builds on Menchville's current role as the primary off-loading and marina facility in the Harbor. Menchville's seven acres of land area and 1,600 feet of harborfront are fully utilized in the creation of the Menchville Oyster and Seafood Center, a major seafood park marina and distribution/market center. A joint development project involving all property owners of the marina or a city-initiated private development corporation provides quality seafood-handling, berthing, servicing, and support facilities for the industry. Seafood handling activities facilitated here will include off-loading from boats, packing, marketing and distribution, and limited processing. An efficiently laid-out marina will provide adequate slips for berthing of boats. Sanitary pump-out stations, fueling stations, put-in/pull-out, maintenance and repair facilities are to be provided for the servicing of boats and equipment. Necessary support facilities at the center include adequate parking, restrooms and showers.

The availability of adequate marine service in the harbor is critical to the functioning of the seafood harvesting industry. Existing repair and maintenance facilities at the Harborview and James River Marinas, as well as at Menchville, are encouraged to upgrade and increase their service to the commercial fleet. Facilities should be made available for owner servicing of boats and equipment.

The Seafood Center will contain opportunities for the public to get close to the water and activities of the working harborfront, including walkways, tourboats and fishing excursions. Commercial development should include marine-related specialty shops, boat stores, and restaurants where visitors can relax and enjoy the freshest local seafood and Deep Creek Harbor's special atmosphere.

The primary feature of the Menchville Seafood Center will be the wholesale/retail seafood market supplied by local seafood harvesters and distributors. Utilizing the common concept of the farmer's market, the facility could be operated cooperatively. In this way, the Seafood Market will provide excellent sales and marketing opportunities for harvesters and distributors while offering the best and freshest seafood to consumers. The uniqueness of the seafood market will also create an economically beneficial attraction for Newport News. The Seafood Market in the harbor will remain

Menchville Road will maintain the quiet character of adjoining residential neighborhoods.

Passive recreational opportunities will include open meadows for playing and places to hike, picnic, and simply relax and enjoy the view of the river's many moods and seasons. Here, one will be able to observe the ebb and flow of oyster boats and the historic seafood landing activities of adjacent Deep Creek Harbor.

Just inland from the shore, the historic City Farm barn with its horses, cattle and other farm animals becomes the focal point of the working Farm Park. The Plan envisions the old-time agricultural activities and character of this area to be maintained for the benefit of all. Here families, school children and those who want to remember "how it used to be" can still touch, see and feel the country within the City of Newport News.

The surrounding natural areas of wetlands and forest add yet another dimension to this park, affording an environment for nature trails and habitat for wildlife observation. The park's nature center will serve as the educational and entertaining starting point for getting the most out of the rich natural heritage of the Deep Creek/Menchville area.

The shallow waters adjacent to the park, stretching up the Warwick River and across to Mulberry Island and the James beyond, are well suited for canoes and rowboats which could be made available at the park.

Power and deeper draft boats will be accommodated by the man-made harbor excavated from a 25-year old dredge spoil site at the mouth of Deep Creek. This inlet has been unusable and has failed to support vegetation since it was used to dispose dredge material in the early 1960s. The Plan calls for the clean-up of this area for productive use as a harbor for pleasure boats, allowing Deep Creek Harbor to continue to primarily serve the working waterman at the Menchville wharves and the Deep Creek pier. Containing a marina and boat ramp, this harbor will be designed to blend well with the adjacent park. The eastern shore of the new recreational harbor will open up a significant area of vacant residential land to waterfront development. Development of the harbor in conjunction with this residential project, as well as with the park, will be essential to its feasibility.

SEAFOOD COMMERCIAL/INDUSTRIAL

Through the Plan, Deep Creek Harbor continues its historic role as the primary center for the James River oyster/seafood harvesting industry. The waters of the Harbor retain their current priority for working boat use and all harborfront land currently in working marina use remains dedicated to this use.

An overall development and preservation program for Deep Creek Harbor will result in an optimal working harbor which is efficient for the seafood industry, protective of the environment, and enjoyable to residents and visitors. The Harbor of the Plan is home to efficient working marinas, adequate marine service facilities, and a seafood market center. Jetties at the harbor entrance and bulkhead improvements at the marinas should keep the harbor open with minimal dredging. Well designed and maintained marine facilities, thoughtful trash disposal, employment of Best Management Practices

open to continued regional, national and international brokering and distribution by existing operators at Menchville and Deep Creek, as well as the buy boats in the harbor.

RESIDENTIAL

Protection of the area's established residential neighborhoods is a priority of the Plan. No additional areas of residential development are proposed and there is no use of publicly owned land for residential development. However, build-out of vacant private land currently zoned for residential use will continue.

The Plan maintains the low density, residential character of Menchville and Deep Creek neighborhoods. No additional medium or high density residential areas are designated. The area currently zoned for medium density multi-family residential is so designated by the Plan and no change is proposed.

Much of the peninsula formed in lower Menchville between the new recreational harbor and Deep Creek, is utilized for planned waterfront residential development. This residential development will be planned to make the most of the special attributes of this location and will be layed out in a cohesive manner. The adjacent recreational harbor, Menchville Seafood Center, park, and, of course, Deep Creek Harbor, will form a quality setting in which to carefully place this residential use.

The Plan has been arranged to provide maximum protection of the residential neighborhoods from potential adverse impacts of other uses. The relocated City Farm Correctional Facility, reusable dredge deposit, and wastewater treatment plant expansion have been sited where natural and existing buffers will best protect nearby residential areas. Additional earth mound and naturally landscaped buffers are proposed to provide further protection. As the area develops, Deep Creek/Menchville will continue to be a special place to live.

NATURAL AREAS/ENVIRONMENT

All designated wetlands areas are included in the Natural Area designation. Protection and management of these environmentally significant areas will retain the natural heritage of this vital area for generations to come. A trail system will connect public natural areas to the park network to provide for appropriate public access to these resources. An advisory service and the provisions of the Chesapeake Bay Preservation Act assist owners in the proper preservation and management of privately held natural areas.

Water quality will be restored and protected by replacement of septic systems with sanitary sewer, development of a storm water management system, installation and use of facilities for sanitary pump-out of boats, careful handling of fuel and oil in the marinas and proper disposal of trash. Residents, users of Deep Creek's waters, civic groups and the entire community will be involved in the cleanup and ongoing protection of the Deep Creek environment.

CITY FARM

A 25-acre site for the new City Farm minimum security correctional facilities is located on the western portion of the plan area, north of and adjacent to

the Wastewater Treatment Plant. This site is buffered from the nearest residential neighborhood by a natural wooded ravine, and an additional 200 foot wide man-made buffer is proposed. The site is land efficient because it shares a common buffer area with the adjacent wastewater treatment plant and because it does not encumber lands desirable for other uses.

Relocation of the City Farm Correctional Facility to another location out of the area is a possibility, although extensive studies over the past 10 years have not resulted in a feasible alternative. However, relocation of the existing facility is critical to the development of other priority components of the plan, particularly the waterfront park. Retention of this available site on land currently owned and now a part of the City Farm for use if necessary as a correctional facility site, will help ensure the availability of the riverfront for public park use within a reasonable time frame.

The City Farm facility of the Plan will be designed with a residential scale and character and will retain the low intensity nature of the existing facility. Although the living and administrative facilities will be confined to a smaller, 25-acre site, the entire area continues to function as a "city farm," because the park and other public facilities will be constructed and maintained in part by inmates. Through this arrangement, Newport News' citizens benefit by their use and enjoyment of this public land and from the lower costs of building and maintaining the public facilities. The City Farm benefits from the needed new correctional facilities, from the revenues received for their work and continued high success at rehabilitation through meaningful work. Finally, the taxpayers benefit from provision of the facility on land which the City already owns and from the public costs saved by work performed by inmates. The aspects of the City Farm Facility that have made it a model correctional institution and a good neighbor for more than 70 years will be continued in its new location.

The police facilities, including the vehicle impound, weapons firing range, and canine facilities/kennel will also be relocated. The vehicle impoundment area and firing range are transferred off-site to a new location more compatible with surrounding uses. However, the kennel will be included as an integral part of the animal facilities of the "farm park."

WASTEWATER TREATMENT PLANT

Nine acres northeast of the exiting HRSD plant are devoted to expansion of this facility. This area is away from the waterfront and away from nearby residential use. This expansion allows the plant to increase its capacity to 30 million gallons/day, the maximum necessary to accommodate potential growth in its service area, but more importantly it will provide for nutrient removal facilities to aid the water quality of the James River. Five of the nine acres are devoted to a buffer system surrounding the plant. The wetland and shoreline area adjacent to the plant will also be buffered from the facility and become part of the natural area designated for conservation and the park network.

DREDGE DEPOSIT

Provision of a suitable dredge spoil disposal alternative to the existing disposal easement in the center of the City Farm land is the first key to the desired development of Deep Creek/Menchville. The Plan designates a 10-acre reusable dredge spoil deposit site on the closed Menchville landfill.

The concept of the reusable dredge deposit is for the material from a dredging to be deposited and then removed/used prior to the next dredging. The U.S. Army Corps of Engineers estimates that 210,000 cubic yards of material will be dredged from the Deep Creek Harbor and channel every seven to ten years. The existing 30-acre easement would last about 50 years at that rate before becoming filled. Recent tests of the sediment in the Harbor indicate a sandy dredge material that will be suitable for a variety of uses, including daily cover on the City's current landfill in Denbigh, beach replenishment along the James River, and construction fill. This material is of adequate quality to be marketable for purchase and/or haul by construction contractors. Another option is to spread the dried material over the remaining landfill. The rate of dredging will allow at least seven years for removal of the material before the reusable site is required again. The reusable deposit has the advantage of being available indefinitely, while the existing disposal site has a limited life time.

Preliminary analyses support the feasibility and environmental soundness of locating the reusable dredge deposit on this portion of the landfill. A synthetic cover and a drainage collection system prevents water from the dredge from leaching into the landfill.

Locating the dredge spoil deposit site on the landfill places the least desirable use on the least desirable land. The southwest portion of the landfill is the lowest area and therefore is the easiest to pump dredge to and drain from. Environmentally this location is advantageous because wetlands at the outlet will filter any water-borne spoil sediment remaining in drainage from the dredge deposit before it re-enters Deep Creek. This area is protected from the residential neighborhood to the north by the ridge of the landfill and from the south by the natural wooded buffer. Views of this area from Menchville Road are blocked by the existing landfill berm. This location has the best access into and out of the area for hauling of the dredge spoil sand and is the least expensive alternative to the existing disposal easement.

LANDFILL

The reclamation of the Menchville landfill for productive use will be a long range program phased over 20 to 30 years. Initially the only use here will be the reusable dredge deposit on a 10-acre portion of the landfill. No public use is anticipated for at least 20 years, until compaction and methane production subsides due to tapering off of the organic decay cycle. However, in the future this will be an ideal location for passive recreation in conjunction with the adjacent natural areas. The landfill's one-half mile of creekfront will be developed to provide public access to the major wetlands and creeks above the Harbor for canoeing, rowing, fishing, wildlife observation and other low-intensity passive recreational activities. Phased landscape buffering, in keeping with the integrity of the landfill's protective cap, will be installed to improve the site visually and to provide erosion control.

STREETS/UTILITIES

The plan provides major improvements to the street system of the area. On the Menchville side, Lucas Creek Road is extended between the City Farm Correctional site and the upper park into the riverfront park, providing access to the Farm Park and new recreational harbor. It is connected to Menchville Road by City Farm Road. This configuration allows two means of

access to the park, relieving traffic pressure on Menchville Road. Lucas Creek Road to the Eastwood/Bland connector will provide direct access to Patrick Henry Airport for national seafood distribution as an alternative to the current Boxley Boulevard, Oyster Point Road, and Jefferson Avenue Route.

Although allowing route alternatives, the street layout discourages traffic from traveling through the park to other destinations. Parking and traffic areas are kept away from the waterfront and natural areas. Streets through Menchville will be tree-lined and designed to a park scale as well as to efficiently handle required traffic capacity.

On the Deep Creek side, Deep Creek Road will be widened to its terminus where public parking and a turn-around are provided.

Complete utility systems will be provided to serve the area including adequate water, sanitary sewer, and storm sewer.

STRATEGIES

The following strategies represent the means for meeting each of the goals for Deep Creek/Menchville.

PARK/RECREATION

GOAL: UTILIZE MENCHVILLE'S LARGE AREA OF PUBLIC LAND TO CREATE A COMMUNITY PARK WHICH PROVIDES FOR PUBLIC ENJOYMENT OF THE RIVERFRONT AND NATURAL ENVIRONMENT, RETAINS THE QUIET COUNTRY CHARACTER OF THE EXISTING FARM, AND WHICH PROVIDES A WIDE VARIETY OF ACTIVE AND PASSIVE RECREATION OPPORTUNITIES.

STRATEGIES:

- Convert all public land at the City Farm to park use, except for the Wastewater Treatment Plant expansion area and a possible new City Farm site.
- Provide active and passive recreational opportunities for the wide variety of ages and interests of Newport News citizens.
- Reserve the riverfront area of the City Farm and wastewater treatment plant for passive and water-related park uses.
- Retain the existing rural farm character in the design of the park.

- Create a working farm park built around the historic City Farm barn and pastures.

- Excavate a recreational harbor and marina from the existing dredge-filled inlet at the mouth of Deep Creek.

- Preserve the shallow waters adjacent to the shore and wetlands of the future riverfront park for non-power boating and water activities.

- Plan, design, and buffer active recreation areas of the park to protect nearby residential neighborhoods.

- Actively involve neighboring residents and interested citizens in the park planning and design process.

SEAFOOD COMMERCIAL/INDUSTRIAL

GOAL: PRESERVE AND ENHANCE DEEP CREEK HARBOR'S HISTORIC ROLE AS THE WORKING HOME OF THE JAMES RIVER OYSTER/SEAFOOD HARVESTING INDUSTRY THROUGH PROVISION OF OPTIMAL FACILITIES FOR MARKET AND DISTRIBUTION, MARINE STORAGE AND SERVICE, AND OTHER INDUSTRY SUPPORT.

STRATEGIES:

- Formulate an overall plan for optimal development of Deep Creek Harbor for commercial seafood harvesting operations.

- Maintain and enhance the Harbor's primary role as a working harbor.

- Discourage increased recreational boating use of Deep Creek Harbor.

- Develop the Menchville Marina area as a functional oyster/seafood park marina and distribution/marketing center.

- Work in partnership with existing property owners or a private development corporation to implement a specific development plan for Menchville to provide facilities for berthing, off-loading, marketing/distribution, limited processing, servicing, and other industry support.

- Provide the necessary facilities for seafood operations at the Deep Creek pier, including parking, restrooms, a sanitary pump-out station and adequate traffic circulation. Also, provide amenities to make this area attractive to the public.

- Involve Deep Creek property owners in the planning and design of pier area improvements and encourage their cooperation.

- Maintain and improve the Deep Creek public pier/marina area for more effective commercial boating operations.

- Enhance provisions for Marine service support, including facilities for owner servicing of boats/equipment.

- Encourage continued use and enhancement of existing marine facilities in the Harbor.

- Preserve and enhance the limited land area available for commercial seafood operations.

- Prevent further rezoning/conversion of seafood commercial/industrial land for other uses.

- Formulate a specific marine commercial/industrial zoning district which will designate land for uses associated with working waterfront activities while closing out inappropriate industrial activities.

- Review proposed development for impacts on the seafood industry and future marina development.

- Maintain and improve road access to marina facilities on Deep Creek Harbor.

GOAL: TAKE MAXIMUM ADVANTAGE OF THE ECONOMIC POTENTIAL OF THE DEEP CREEK SEAFOOD INDUSTRY.

STRATEGY:

- Support the establishment of a wholesale/retail seafood market to be potentially owned/operated cooperatively by seafood harvesters, buyers, and/or distributors.

- Public actions affecting the seafood industry should involve the participation of the Working Watermen's Association and seafood buyers/distributors.

RESIDENTIAL

GOAL: MAINTAIN THE LOW DENSITY SEMI-RURAL RESIDENTIAL CHARACTER OF DEEP CREEK/MENCHVILLE AND PRESERVE THE AREA'S HISTORIC QUALITY.

STRATEGIES:

- Publicly-owned land of the City Farm shall not be converted for private use.

- There shall be no further rezoning of land to residential from other zones in Deep Creek or Menchville.

- Allow complete build-out of existing developments according to approved plans.

- There shall be no further rezoning of land to multi-family or high-density residential from other zones in Deep Creek or Menchville.

- Permit development of private vacant parcels according to existing zoning, or PRD, and in accordance with recommended Chesapeake Bay Preservation guidelines.

- Designate and preserve the area's remaining historic resources.

- Development in Deep Creek waterways should include specific measures to protect wetlands, steep slopes, shorelines, forested areas, trees and other sensitive areas.

NATURAL AREAS/ENVIRONMENT

GOAL: PROTECT AND RESTORE THE RICH BUT FRAGILE NATURAL ENVIRONMENT OF DEEP CREEK/MENCHVILLE, INCLUDING ITS WETLANDS, FORESTS AND WATERS.

STRATEGIES:

- Formulate an environmental preservation, restoration and management plan for Deep Creek/Menchville.
- Promote opportunities to involve citizens directly in Deep Creek environmental restoration efforts.
- Preserve and protect all tidal wetlands in their natural state.
- Protect non-tidal wetlands, while permitting appropriate water facility development.
- Adopt Section 62.1-13.5 of the Code of Virginia, the Wetlands Zoning Ordinance, establishing a Wetlands Board and local procedures for review of wetland development.
- Protect forested areas.
- Revise City regulations to require connection of structures on existing septic systems to sanitary sewer upon its availability.
- Provide incentives for early connection to City sewer in the form of discounts of sewer connect fees.
- Convey land necessary for the expansion of the James River Wastewater Treatment Plant to provide for construction of nutrient reduction facilities.
- Install proposed sanitary sewer pump stations No. 33 and 35 at the end of Menchville Road and Deep Creek Road, respectively, and extend sanitary sewer force mains to these pump stations.
- Implement "Best Management Practices" for the control of stormwater runoff.
- Require installation of boat sewage pump-out facilities upon availability of City sewer at all marina facilities in Deep Creek Harbor, including Menchville Marina, Warwick Yacht Club, Harborview Marina, and in proximity to the Deep Creek pier.
- Retain and restore vegetation on steep slopes to prevent erosion.
- On-site soil borings shall be conducted prior to development on or near slopes of 15% or greater to identify highly erodible soils.

- Slopes of 15% or above should be left undisturbed. Soil erosion control measures shall be used in accordance with Department of Engineering guidelines.

- The Erosion and Sediment Control Ordinance of the City of Newport News shall be strictly enforced while monitoring development and redevelopment within the Deep Creek watershed.

- Land use, development and redevelopment within Chesapeake Bay Preservation Areas shall be strictly enforced while monitoring development and redevelopment within the 100 year floodplain.

- Evaluate loading potentials for several pollutants, such as oil, grease, and lead from various sources.

- Implement a storm water management plan in the Deep Creek Watershed area based on sources of pollutant loadings.

- Determine the source of high metals concentrations in the Deep Creek surface water at the upstream monitoring locations. Conduct Bioassays to determine impact on aquatic resources, if metals concentrations are at levels of concern.

- If existing and future dredge material is to be used in a public area, metals concentrations and distribution should be examined in more detail.

CITY FARM

GOAL: RELOCATE THE CITY FARM MINIMUM SECURITY PRISON IN A MANNER COMPATIBLE WITH NEARBY RESIDENTIAL AND OTHER USES, WHILE CREATING A MORE FUNCTIONAL FACILITY AND RETAINING ITS COMMUNITY SERVICE CAPACITY AND ITS REHABILITATION OF INMATES THROUGH CONSTRUCTIVE TRAINING AND WORK.

STRATEGIES:

- Retain a 20 to 30 acre relocation site at the current City Farm while finalizing the search for a regional location.

- Develop a City Farm relocation plan including site/facilities plans, phasing, and financing.

- Release the majority of agricultural land at the upper area of the farm for the first phases of park.

- Utilize farm personnel to construct and maintain public uses including the park, marine facilities and for landfill reclamation assistance.

- Provide buffering and protection for nearby residential neighborhoods and from the future park.

- Design the new facility with low-intensity residential scale and character to blend with nearby residential areas.

- Relocate police functions existing at the City Farm. The canine facilities may be incorporated with the future Farm Park. The weapons firing range and vehicle impound shall be relocated to a suitable location to be found off-site.

WASTEWATER TREATMENT PLANT EXPANSION

GOAL: ENSURE WASTEWATER TREATMENT TO A LEVEL WHICH ELIMINATES CHEMICALS, I.E. CHLORINE, IN ORDER TO PREVENT HARMFUL IMPACTS ON THE SEAFOOD PRODUCTIVITY OF THE JAMES RIVER AND ITS TRIBUTARIES.

STRATEGIES:

- Encourage the licensing and operation of chlorine removal facilities existing at the James River Treatment Plant.

- If existing and planned treatment facilities do not adequately improve water quality, encourage HRSD to explore additional treatment processes and extension of the plant's outfall into the main current of the James River to prevent effluent from concentrating in the Warwick River area.

GOAL: PROVIDE FOR THE EXPANSION OF THE JAMES RIVER WASTEWATER TREATMENT PLANT TO INCREASE ITS CAPACITY AND IMPROVE WATER QUALITY IN A MANNER WHICH MAKES THE MOST OF VALUABLE RIVERFRONT AND IS MOST PROTECTIVE OF NEARBY RESIDENTIAL AREAS.

STRATEGIES:

- Allocate nine acres northeast of the HRSD James River Treatment Plant for its expansion.

- Obtain release of the USCOE dredge spoil easement as soon as possible to clear title for conveyance to HRSD.

- Acquire from HRSD the right of public access to wetlands and along the waterfront upon conveyance of plant expansion land.

- Buffer the plant and expansion from adjacent residential areas and the future park and City Farm.

DREDGE DEPOSIT

GOAL: DEVELOP A SUITABLE ALTERNATIVE TO THE CITY FARM DREDGE DISPOSAL SITE AND OBTAIN THE RELEASE OF THE EXISTING SITE FROM THE U.S. ARMY CORPS OF ENGINEERS.

STRATEGIES:

- Take steps to reduce Harbor and channel siltation as much as possible through bulkheading of marina areas, protection of wetlands upstream, shoreline/slope protection adjacent to the harbor, and an adequate stormwater management system.

- Obtain release of the existing dredge disposal easement on City Farm land from the Army Corps of Engineers.

- Develop a reusable dredge deposit site at the closed Menchville landfill.

LANDFILL

GOAL: RECLAIM THE MENCHVILLE LANDFILL FOR APPROPRIATE AND PRODUCTIVE USE AND IMPROVE ITS VISUAL AND ENVIRONMENTAL CHARACTERISTICS.

STRATEGIES:

- Develop a long-term reclamation plan for the landfill.
- Develop the majority of the landfill for future passive recreation uses, including play fields, picnic grounds overlooking Deep Creek, and a creek front access area for fishing and boating.
- Allocate a 10-acre area on the southwest portion of the landfill for the reusable dredge deposit area.
- Buffer the landfill from surrounding uses according to a naturalized landscaping plan.
- Continue to monitor the landfill for potential environmental impacts.
- Protect the landfill's cap to prevent surface water leaching and uncontrolled gas escape.

STREETS

GOAL: PROVIDE ADEQUATE INFRASTRUCTURE, INCLUDING STREETS, TO SERVE EXISTING AND FUTURE NEEDS.

STRATEGIES:

- Upgrade Menchville Road between Youngs Road and the Harbor.
- Upgrade Deep Creek Road and provide a public turn-around at its terminus in conjunction with pier area parking and improvements.
- Extend Boxley Boulevard to Lucas Creek Road and improve Lucas Creek Road to four lanes.
- Extend Lucas Creek Road into the area in conjunction with park development to provide park access from the Denbigh area.
- Improve City Farm Road in conjunction with park development.

UTILITIES

GOAL: PROVIDE ADEQUATE WATER, SANITARY AND STORM SEWER UTILITIES TO SERVE EXISTING AND FUTURE NEEDS.

STRATEGIES:

- Install a larger water main through lower Menchville, as planned, to improve pressure and capacity.

- Explore the feasibility of a water system loop between Deep Creek and Menchville.
- Continue sanitary sewer improvements to provide sewer service to all existing development in the Deep Creek watershed.
- Institute a sewer hook-up program for the conversion of all septic systems to City sewer.
- Develop and install an environmentally-sound storm drainage management system in the Deep Creek Watershed.

PROJECTS AND PHASING

DEVELOPMENT PROJECTS

Implementation of the strategies of the plan will require a number of specific development projects which are outlined as follows:

PARK/RECREATION

Development of the Park/Recreation component of the Plan will entail several inter-related projects.

Upper Park This will be the largest portion of the park, covering the northern 115 acres extending from Youngs Road south to City Farm Road west of Menchville Road. This project involves development of the park's active recreation facilities. An active park area will provide tennis, volleyball, basketball, and multi-use courts. Skateboard runs, shuffleboard courts, horseshoe pits, and facilities for other specialized games and activities will also be provided here. Athletic fields included in this area will provide for football, soccer, and softball. Open play fields will provide for other sports as well. A network of jogging, bicycling, and fitness trails will be integrated into the park facilities. Tot lots, picnic facilities, and other amenities will also be provided in the upper park and some passive recreational opportunities are also included here. Design, layout, and buffering for compatibility with nearby residential neighborhoods will be an important consideration in the development of this park area. Integration with the school facilities across Youngs Road must also be considered.

Riverfront Park Access to the shore and waters of the Warwick River is the theme of this area of the park. Primarily passive,water-related activities, such as viewing, walking, picnicing, relaxing, and fishing will be afforded here. Also included will be canoeing, rowing, and other non-power boating. This will be a pedestrian-oriented area of about 22 acres designed for least possible disturbance by motor vehicles.

Farm Park This should be designed as a low intensity working farm with the type and number of animals based on the comfortable capacity of the farm area and compatibility with other park uses. This park is planned around the historic barn of the City Farm and should be designed to retain its existing rural character for the enjoyment of park visitors. The Farm Park will consist of approximately 12 acres.

Recreational Harbor This is an ambitious project that will provide recreational boating facilities through the excavation of the filled wetland area at the mouth of Deep Creek Harbor. The harbor should include boat launch, trailer parking, marina and all other related facilities appropriate in its park and natural area setting. Development of the recreational harbor and marina should be preceded by detailed engineering and economic feasibility studies. The harbor should be developed in conjunction with the adjacent waterfront planned residential development. The recreational marina could be developed and/or operated privately or in partnership with the City.

Development of the harbor will require detailed soil engineering and hydrologic studies. Care must be taken in its design to ensure a functional harbor entrance due to its location on the channel into Deep Creek Harbor and to ensure compatibility with the adjacent Farm Park.

Nature Center/Natural Areas This project involves the 40 acres of natural wetland and forest that are part of the park area. These natural areas will be integrated with the other park components by a nature/recreational trail system. A nature center will provide interpretation of the flora and fauna of this environment. Careful design and control of access will be critical to provide for maximum enjoyment of these sensitive areas while ensuring their protection.

Park Overall The entire park system will contain approximately 360 acres. The park must be served by adequate parking, restrooms, lighting, directional signage, phones, security, medical assistance, seating, tables, and all other appropriate amenities, conveniences, and safety facilities. All park components must also be accessible to the handicapped.

SEAFOOD COMMERCIAL/INDUSTRIAL

There are three distinct projects which will involve development of Deep Creek Harbor so as to best support the seafood harvesting industry.

Deep Creek Pier Area This project involves improvements to the overall Deep Creek Pier, marina, restaurant, and seafood commercial area at the foot of Deep Creek Road. Bulkheading of the shore, dredging and cleanup of the waters of the pier and Marina area (including removal of sunken boats and debris), maintenance/improvement of Deep Creek Pier and the other mooring facilities will create a more efficient and functional pier/marina area. Enhancement of existing marine service facilities of the James River Marina will be an important part of this project. Seafood off-loading, buying and handling will

continue to be a function of the pier. Access and parking improvements will provide a public turnaround at the terminus of Deep Creek Road and public parking for watermen and visitors. Restrooms and a sanitary pump-out station for boats should be included. The existing Herman's Harbor House Restaurant and James River Marina will be integral to the overall improvements.

A series of phased projects will provide adequate parking in the Deep Creek Pier area in conjunction with other improvements. An efficient layout of existing parking areas at Herman's Harbor House Restaurant and the James River Marina will yield a significant number of additional spaces over those provided by the current open lots. This will require paving, wheel stops and/or curbing in order to delineate aisles and parking stalls. Adequate spaces adjacent to the restaurant and marina building can be reserved for restaurant customers and marina business, while other spaces can be designated for use by watermen during the day. During the late afternoon and evening hours nearly all spaces would be available for restaurant and marina patrons, and other visitors. An agreement between the property owner and the City should be formulated whereby the City will obtain parking for the watermen and right-of-way for a turn-around in exchange for parking improvements.

Parking for watermen and visitors to the pier should be developed along the Deep Creek Road right-of-way in a head-in or angled parking configuration. This project could also provide walkways along the roadway to the pier area and a small park overlooking the harbor and pier. Picnic facilities, benches and other amenities would be included. This project will involve acquisition of right-of-way from the property west of Deep Creek Road.

A parking structure adjacent to Deep Creek Road on the east could provide the greatest number of spaces. The grade differential between Deep Creek Road, on the upper level, and the restaurant parking lot, on the lower level, would allow the structure to be accessed without construction of ramps. Utilization of the industrial-zoned land currently in residential use for a surface parking lot would also provide a large number of spaces. This would require the relocation of four residences.

Menchville Oyster/Seafood Center This will be a major center providing adequate facilities for all aspects of the lower James River Seafood harvesting industry, including seafood handling/distribution, boat storage/service, marketing, and support. Major improvements should include shore bulkheading and a marina with adequate berthing facilities. Handling and distribution facilities are necessary to provide for off-loading, processing/washing, packing, truck loading/staging. Service facilities should include sanitary pump-out and fueling stations, boat put-in/take-out lifts or ramps, and maintenance and repair areas. Land facilities must include efficient traffic circulation and access, parking, restrooms, trash disposal and convenience commercial. Public facilities provided should include restaurants, marine-related specialty commercial, pedestrian facilities/amenities and a walkway connection to the neighboring park. Seafood market facilities, including the cooperative market, are key to the Menchville Center.

Overall Harbor Development In addition to the Deep Creek and Menchville projects, comprehensive improvements to Deep Creek Harbor should include jetties and channel improvements, continued dredging, and some bulkheading. The City should work with the owners/operators of Harborview Marina in order to enhance the marine service operations of this facility, particularly to

retain its boat lift. In addition, all marinas in the Harbor need to install sanitary pump-out stations. Efforts involving other harborfront owners should be made to facilitate improvements to private docks, piers and other facilities as needed for environmental, safety or other purposes.

CITY FARM

A 25-acre relocation site is required for the City Farm. Residential, food service, training and related detention facilities totaling 120,000 square feet; an administrative building of 4,800 square feet; and equipment storage/maintenance facilities of 18,000 square feet make up the new City Farm's main components. A 200-foot wide buffer area is required to surround the facility. The layout, scale, and design of City Farm structures should be of a residential character for compatibility with nearby public and residential uses.

DREDGE DEPOSIT

Development of this facility is critical to the park development, because it is required for release of the existing disposal easement located on the park site. A 10-acre reusable dredge deposit site on the southwest portion of the landfill will provide for ongoing dredge disposal. This location is the low-lying portion of the landfill and is shielded from adjacent residential areas and Menchville Road. The site is best suited for drainage and for truck access for potential removal of the dredge material for use elsewhere. Dredge material will be useful in the reclamation of the remainder of the landfill. A liner and underlying drainage system is necessary to protect the integrity of the landfill and prevent leaching. Use of this site will require a permit from the Virginia Department of Waste Management and approval by the Corps of Engineers.

LANDFILL RECLAMATION

Reclamation of the Menchville Landfill's 55 acres will be an ongoing, long range project. The landfill provides a location for passive recreation activities. It also offers access to the creekfront and its wetlands above Deep Creek Harbor for canoeing/row-boating, fishing, and wildlife observation. Complete facilities for these activities should include vehicle access, parking, walkways, trails, docks, open fields, picnic areas/equipment, and other appropriate park facilities. In the interim, landscaped buffering will be installed to improve the visual characteristics of the landfill from off site. Ten acres of the landfill should be retained for a reusable dredge deposit.

PHASING

The Deep Creek/Menchville Plan is a long-range plan that will be implemented over a number of years. Although all are necessary to meet the overall goals of the master plan for the area, many of the component projects are relatively independent and can be carried out according to a flexible schedule. The plan provides a rational framework for these improvements. As each component project is carried out it will form a building block toward the accomplishment of the total program.

In order to efficiently implement the Deep Creek/Menchville Plan based on expressed priorities and the functional progression of improvements, the component projects should be phased as follows.

PHASE ONE: SHORT RANGE PROGRAM

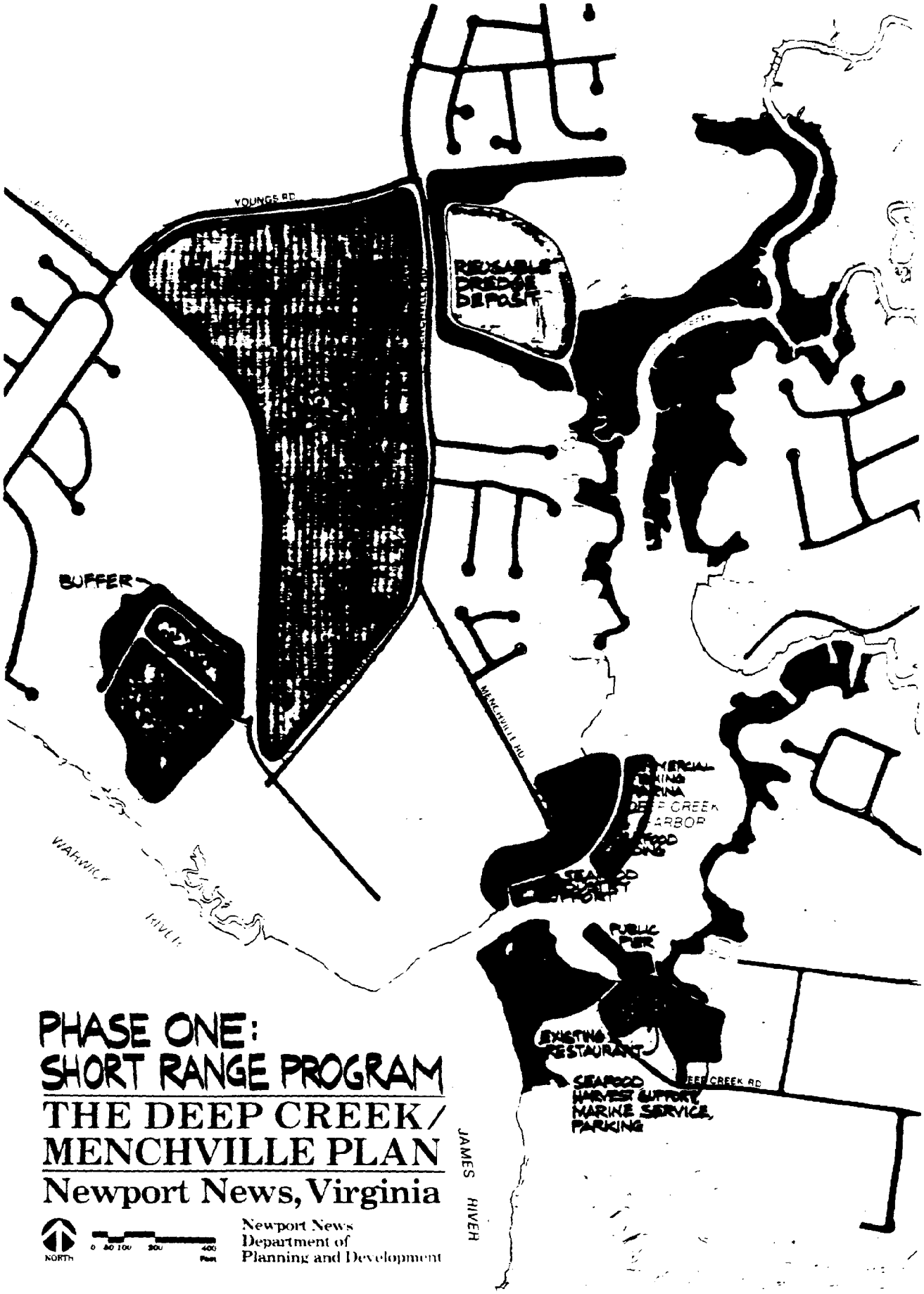
- Reusable Dredge Deposit
- Release of existing dredge disposal easement
- Wastewater treatment plant expansion and buffering. Acquisition of wetland and shore adjacent to plant.
- Park improvements - upper park - initial phases
- Menchville Oyster/Seafood Center - initial phases
- Cooperative seafood market formation
- Deep Creek pier area improvements
- Deep Creek Harbor improvements - initial phases
- Landfill reclamation - buffering
- Street improvement - Menchville Road, Deep Creek Road
- Lower Menchville water line
- Storm sewer system
- Sanitary sewer hookup program
- Final siting for City Farm relocation
- Chesapeake Bay Act - local regulations
- Environmental restoration/management program

PHASE TWO: INTERMEDIATE RANGE PROGRAM

- City Farm relocation
- Police functions relocation
- Lucas Creek Road extension, City Farm Road improvements
- Park improvements - Riverfront Park, Farm Park
- Natural area system, trail access
- Menchville Oyster/Seafood Center
- Deep Creek Harbor improvements

PHASE THREE: LONG RANGE PROGRAM

- Recreational Harbor
- Landfill Reclamation - passive recreation, natural area access.



PHASE ONE: SHORT RANGE PROGRAM

THE DEEP CREEK/ MENCHVILLE PLAN

Newport News, Virginia

NORTH

0 50 100 200 400 Feet

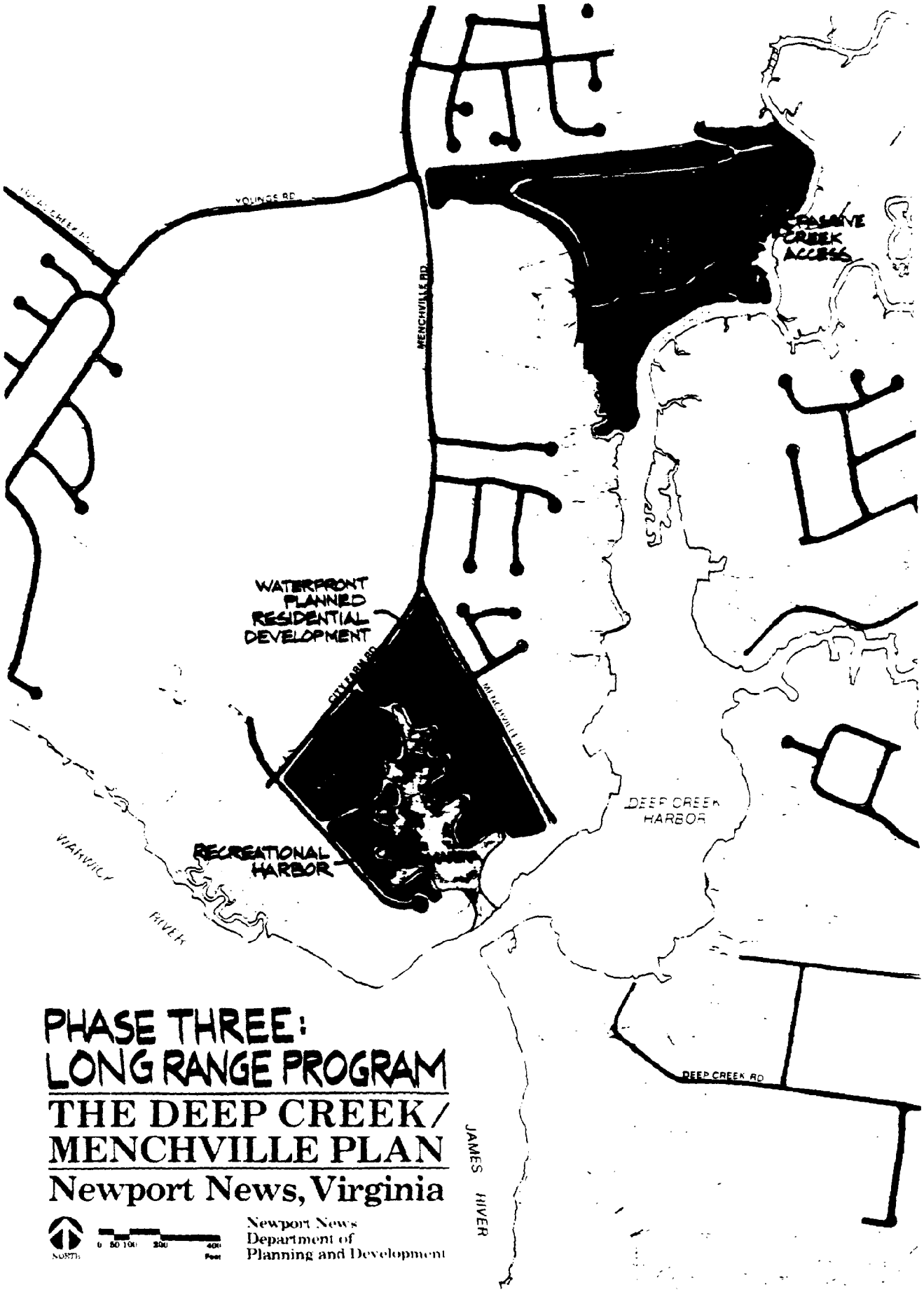
Newport News
Department of
Planning and Development

PHASES ONE-TWO: INTERMEDIATE RANGE PROGRAM

THE DEEP CREEK/ MENCHVILLE PLAN

Newport News, Virginia

Newport News
Department of
Planning and Development



PHASE THREE: LONG RANGE PROGRAM

THE DEEP CREEK/ MENCHVILLE PLAN

Newport News, Virginia

Newport News
Department of
Planning and Development

IMPLEMENTATION

FRAMEWORK FOR ACTION

The Deep Creek/Menchville Plan serves as the framework for development of the component uses within the area. Effective action to implement the plan will require public, private, and intergovernmental cooperation, effective administration, formulation of a number of detailed plans, regulatory review, public infrastructure improvements, and adequate financing.

PUBLIC, PRIVATE, AND INTERGOVERNMENTAL RESPONSIBILITIES

The cooperation of a number of City Departments, private property owners, and other governmental agencies will be required to make the Plan become reality.

The significant public ownership and proposed public uses place the responsibility for implementation primarily on the public. Park development, City Farm relocation, and landfill reclamation are the responsibility of the City and will require an extensive amount of work by its citizens, departments, and officials.

The Plan also contains vital projects where public/private partnerships will be crucial, and others which will rely on intergovernmental cooperation. The Menchville Oyster/Seafood Center, Deep Creek pier area improvements and the new harbor will require the partnership of the City and the property owners

involved. A City-initiated private development corporation should be explored as the vehicle to implement the Menchville project.

Intergovernmental cooperation between the City and the U.S. Army Corps of Engineers will be necessary for the development of the reusable dredge deposit while the concerted efforts of the Hampton Roads Sanitation District and the City will be necessary to facilitate the waste water treatment plant expansion.

ADMINISTRATION

There are numerous and complex tasks associated with the implementation of each of the Plan's components. The primary need is for effective administration to carry out these tasks. This work falls logically to several City departments.

The active involvement of citizens, valuable resource persons of the area, and a number of knowledgeable agencies along with the City departments will be critical to the success of these efforts. The high level of community pride and concern in the area and the spirit of involvement exhibited by the people of Deep Creek/Menchville offers a significant resource for the accomplishment of the Plan's goals. A series of task forces, each charged with a specific goal and led by the responsible department, will be an effective means of taking advantage of this human resource.

The implementation tasks should be administered as follows:

A Parks and Recreation Task Force headed up by the Department of Parks and Recreation, with citizen members representing the nearby neighborhoods, will be responsible for the design and development of the Park/Recreation components of the Plan.

Harbor improvements, including those of the Menchville Seafood Center and the Deep Creek parking/pier area, will be overseen by a Deep Creek Harbor Task Force made up of representatives of the watermen, marina and business owners/operators, VIMS, VMRC, and residents from Menchville and Deep Creek. This work will be administered by the Department of Planning and Development.

The City Farm Relocation Committee, made up of members from the City Manager's office, the City Farm, Parks and Recreation, and Planning and Development Departments, will be reactivated to complete its work of locating an alternative site for the Farm and will then move on to overseeing the design of the new facility and carrying out the relocation. The Committee should also take on the relocation of the firing range and vehicle impoundment, but these will be the primary responsibility of the Police Department.

The Public Works Department will continue to administer the landfill reclamation. As a function at the landfill, the reusable dredge deposit will also be the responsibility of Public Works. However, release of the existing dredge spoil easement will be the primary responsibility of the City Attorney's office.

Street, sewer and storm drainage improvements will be carried out by the Engineering Department and the Public Utilities Department will handle water system improvements necessary in the area.

Expansion of the wastewater treatment plant is being administered by its owner, Hampton Roads Sanitation District.

Finally, an Environmental Task Force, overseen by the Department of Planning and Development, will be responsible for the establishment and management of the natural areas. This task force will also be instrumental in carrying out the provisions of the Chesapeake Bay Act as adopted in Newport News and will develop water cleanup methods and activities enlisting the help of Watermen, residents, and civic groups. The Environmental Task Force will work closely with the Parks/Recreation and Harbor task forces and should involve the existing Clean Community Commission.

All task forces and involved departments must work in close communication to ensure coordination of areas of mutual concern.

DETAILED PLANS

Detailed Plans for the specific component projects will need to be prepared. The first of these should be for the Reusable Dredge Deposit because acceptable engineering/design of this facility is a prerequisite to final release of the existing dredge disposal easement. Upon assurance of the release of the easement, HRSD can finalize wastewater treatment plant expansion plans. The City Farm relocation plan, park/recreation plans, Harbor plan, Menchville oyster/seafood center plan, Deep Creek parking/pier area improvements plan, landfill reclamation plan, and the Deep Creek environmental restoration and management plan should also be commenced according to these projects' phasing. These detailed plans should include in depth cost estimates and critical path analysis for implementation procedure as well as design and engineering. They should also identify strategies for financing.

REGULATORY REVIEW/POLICY

A large portion of Deep Creek/Menchville's goals can be realized through the City's development review process. Upon adoption of the Plan, further actions of the City Council and Planning Commission should be reviewed for consistency with the plan. The plan should be considered a statement of policy to be followed in actions affecting the area, including actions on rezonings and conditional use permit applications. The Plan should also be considered a statement of policy in the City's administrative review of subdivision, site plans, and other development applications.

Revisions to the Zoning Code underway at this time should include establishment of a specific Marine Commercial/Industrial Zone that would include all necessary and related uses for working waterfront activities while closing out non-water-related uses.

The Chesapeake Bay Preservation Act will require the City to develop and enforce local regulations meeting the requirements of the Virginia Preservation Area Designation and Management Regulations by mid-1990. The Preservation Area regulations will be an important consideration during the regulatory review of future development and redevelopment in Deep Creek/Menchville and throughout Newport News.

The City should consider establishing a Wetlands Board through adoption of Section 62.1-13.5 of the Code of Virginia, known as the Wetland Zoning Ordinance. The Wetlands Board reviews development on subaqueous (wet) lands in a similar manner to review of upland development by the Planning Commission, but the Wetlands Board is concerned solely with wetlands. The

City's Planning Commission has no jurisdiction over wetlands. Development affecting wetlands is governed by the same code whether or not a local government has a Wetlands Board. If a local government has not adopted the Wetland Zoning Ordinance, these sections of the Code of Virginia are administered by the Commonwealth in that locality. Newport News currently relinquishes review of local wetland development to the Commonwealth.

PUBLIC INFRASTRUCTURE IMPROVEMENTS

Significant traffic circulation improvements are necessary to implement the Plan, including a major extension of Lucas Creek Road into the area and upgrades of Menchville, Deep Creek and City Farm Roads. Seriously needed public parking improvements will be incorporated into development plans for the Menchville Oyster/Seafood Center and the Deep Creek pier area.

Water system upgrading currently planned for Menchville by the Public Utilities Department is critically needed and should be carried out as soon as possible. Major improvements to the sanitary sewer system in Deep Creek are currently under construction. Major sanitary sewer improvements should be undertaken to serve lower Menchville and Deep Creek as well, and a program to ensure hook-up of all households to public sewer should be undertaken. A modern storm sewer system is a critical need for both sides of the harbor and throughout the Deep Creek watershed. These improvements are vital to the environmental health of Deep Creek, as well as for the safety and convenience of residents.

FINANCING

Commitment of the necessary fiscal resources by the City will be required to accomplish the Plan's goals. The Deep Creek/Menchville Plan is a long-range plan that will be implemented over a number of years. The implementation time will vary depending in large part on financing. Although all are necessary to meet the overall goals of the master plan for the area, many of the component projects are relatively independent and can be carried out according to a flexible schedule based on funding.

The majority of funding will need to come from the City itself; primarily through its Capital Improvements Program. The Plan provides a rational framework for its component projects. As each component project is carried out it will form a building block toward accomplishment of the total program. Though funding of the entire program will take time, the long-term "building block" approach will allow the Community's high aspirations for the area to be met in spite of limited annual financing. In this way, Deep Creek/Menchville will be preserved and developed as a lasting asset for ongoing generations. Abandonment of portions of Deep Creek/Menchville to other uses based on financial expediency would unecessarily compromise the value and potential of the unique opportunities here.

Some of the projects are already a commitment of the City, such as the dredge deposit preparation. Funds for this project will simply be dedicated to the reusable deposit rather than the existing disposal easement.

The availability of State and Federal funds is not likely, except possibly for some financing of the correctional facilities of the City Farm and for the Menchville Marina/Seafood Center.

Menchville Seafood Center improvements could be funded according to a public-private development agreement, whereby the City and a private developer jointly provide the necessary funds. Financing of the Seafood Center can be structured to maximize private investment leveraging of public expenditures and to allow the improvements to pay for themselves, to a large extent, through increased economic activity in Deep Creek Harbor. Based on 1988 oyster landings, a $1.00 per bushel wharfage fee would provide over $250,000 annually toward retirement of any debt incurred for Seafood Center improvements.

Revenue and general obligation bonding could be included as part of a sound overall financing plan. Creative financing strategies should be explored as projects are planned in more detail. Also, the availability of grants to aid financing of individual projects should be monitored on an ongoing basis. The environmental efforts of the plan hold particular promise of obtaining some grant funding from established foundations and organizations in support of these goals.

Also, the City has a significant opportunity to reduce costs through the use of City Farm labor and construction/maintenance expertise in its development of this area. The City Farm has already been involved in work on the Deep Creek pier as well as City Farm structures and area rights-of-way. This labor has been valued at well over one-half million dollars annually in recent years.

Specific financing strategies and timing must be included in the planning of individual component projects based on specific costs of these projects. Cost figures will be determined by specific design and engineering of each of the component projects.

IMMEDIATE IMPLEMENTATION ACTIONS

Following are the first action steps toward implementation of the plan following its adoption. These should begin within the next six month period.

1. Appoint and charge task forces and administration of the component projects.

2. Begin the process of dredge disposal easement release with the Corps of Engineers and begin engineering and state licensing for the reusable deposit site on landfill.

3. Prepare documents for conveyance of wastewater treatment plant expansion land to the Hampton Roads Sanitation district for immediate transfer upon release of the existing dredge spoil easement.

4. Finalize assessment of alternative City Farm sites.

5. Sponsor a community workshop to commence the park design process. This should be hosted by the Park/Recreation Task Force.

6. Hold initial meetings with Menchville Marina and Deep Creek pier area property owners to determine their participation in improvements for these areas.

7. Work with involved parties to incorporate the cooperative seafood market.

8. Begin formulation of local environmental management regulations subject to the terms of the Chesapeake Preservation Bay Act.

9. Immediately provide temporary improvements for the use of some City Farm agricultural land for recreation this season.

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